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# 1988
# Financial Condition
# of
# Medical Malpractice JUAs

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# Executive Summary

The financial condition of the twelve active medical malpractice joint underwriting associations (JUA) is of continuing concern to the property/casualty insurance industry. These JUAs provide professional liability coverage for health care providers in Florida, Kansas, Massachusetts, Minnesota, New Hampshire, New York, Pennsylvania, Rhode Island, South Carolina, Texas, Virginia, and Wisconsin. Based on their 1988 financial results, only two, Pennsylvania and Virginia reported a statutory surplus. Florida, Kansas, and Texas each reported a zero dollar surplus. The other seven reported statutory deficits ranging from $200 thousand to almost one billion dollars. In the seven states with deficits, insurers can be assessed to cover the deficits, although to date no JUA, except Texas, has assessed insurers.

In 1985, the National Coordinating Committee on Medical Malpractice JUAs was reactivated. The Committee was originally created in the late 1970's to assist fledgling medical malpractice JUAs and later deactivated. Upon reactivation, the Committee established the Financial Data Subcommittee to examine the financial condition of medical malpractice JUAs. The Subcommittee was specifically charged to collect data on the financial condition of each JUA and to issue a report accurately reflecting each JUA's financial condition. This is the fourth report. The earlier studies found that the invested assets of five JUAs were insufficient to pay all existing claim liabilities even after taking into consideration the investment income expected to be earned on those invested assets.

As with earlier studies, the amount of data supplied by the JUAs varied resulting in the analysis not being as thorough for some JUAs. The analysis for each JUA concentrates on assets, cash flow, statutory reserves, discounted reserves, and rate filing history.

The results of this study that are based on the discounted reserves need to be interpreted as conservative results because the discounted reserves are very sensitive to the assumptions behind the discounting. If the assumptions prove to be optimistic, JUAs appearing to have sufficient funds to pay claim liabilities may not, and JUAs appearing to have insufficient funds to pay claim liabilities will have even larger shortages.

## Major Findings

- Four JUAs, Florida, Massachusetts, New York, and Rhode Island are estimated to have insufficient funds to pay all existing claim liabilities even after taking into consideration the investment income to be earned on current assets.

| | Deficiency in Millions | | |
|---|---|---|---|
| JUA | 1988 | 1987 | 1986 |
| New York | $223.8 | $244.8 | $132.5 |
| Massachusetts | 185.4 | 430.0 | 365.3 |
| Rhode Island | 66.1 | 74.0 | 81.2 |
| Florida | 10.5 | 10.5 | (4.2) |

The deficiency in New York decreased from $244.8 million in 1987 to $223.8 million in 1988. The deficiency in Massachusetts decreased from $430.0 million to $185.4 million. The deficiency in Rhode Island decreased from $74.0 million to $66.1 million. In Florida, the deficit remained unchanged.

The deficiencies will increase if current reserves are understated, current investment yields are not maintained, claims are paid sooner than expected, or if securities have to be sold for less than full value in order to meet claim payment obligations.

- Seven other JUAs, Kansas, New Hampshire, Pennsylvania, South Carolina, Texas, Virginia, and Wisconsin, appear to currently have sufficient funds to pay existing claim liabilities if future investment income expected to be earned on current funds is taken into consideration

**Surplus in Millions**

| JUA | 1988 | 1987 | 1986 |
|---|---|---|---|
| Kansas | $ 4.1 | $ 0.0 | $ 2.4 |
| New Hampshire | 4.9 | (0.7) | (6.3) |
| Pennsylvania | 4.3 | 5.1 | 2.9 |
| South Carolina | 0.9 | (4.8) | (3.5) |
| Texas | 42.3 | 27.1 | 7.4 |
| Virginia | 5.1 | | |
| Wisconsin | 12.0 | 8.3 | 0.1 |

New Hampshire and South Carolina eliminated their deficits in 1988. Texas and Wisconsin surpluses continue to grow. The Kansas surplus strengthened in 1988 after declining in 1987. The Pennsylvania surplus is relatively unchanged. The Virginia surplus was evaluated for the first time in 1988. Minnesota figures are not shown because the JUA is too small to have reliable figures.

Deficiencies, however, could quickly develop for any of these JUAs if reserves are understated, current investment yields are not maintained, claims are paid sooner than expected, or if securities have to be sold at less than full value in order to pay claims.

- Over the last three years actual claim payments to claimants with injuries from 1985 and prior have been less than expected for all JUAs except New Hampshire and Texas.

**Claim Payments in Millions**

| JUA | Actual | Expected |
|---|---|---|
| Florida | $ 28.6 | $ 32.0 |
| Massachusetts | 198.8 | 280.4 |
| New Hampshire | 25.8 | 22.1 |
| New York | 73.2 | 175.6 |
| Rhode Island | 33.7 | 69.1 |
| South Carolina* | 12.2 | 13.3 |
| Texas | 34.3 | 30.0 |
| Wisconsin | 39.4 | 42.2 |

*Injuries from 1986 and prior.

- Based in part on actual payments having been lower than expected, several JUAs have reduced reserve estimates for prior years.

**Reserve Reductions in Millions**

| JUA | 1988 | 1987 | 1986 |
|---|---|---|---|
| Florida | $ 2.7 | $ 1.0 | $ (4.5) |
| Kansas | 1.8 | 0.3 | 1.7 |
| New York | 118.8 | 92.0 | 53.0 |
| Rhode Island | 22.5 | 12.1 | 28.6 |

Massachusetts JUA reserve reductions for prior year reserves are not available by year, but the JUA has reduced its total reserve estimates for claims from 1985, 1986, and 1987 by $200 million since 1985.

- These findings show the volatility in the JUAs' financial results which makes it difficult to precisely quantify their financial condition. What can be concluded despite the volatility is:

  - The Massachusetts and New York JUAs' financial conditions may have stopped deteriorating but large deficits continue to exist.

  - The Kansas, Pennsylvania, Rhode Island JUAs' financial conditions appear to be stable.

  - The New Hampshire, South Carolina, and Wisconsin financial conditions have improved.

  - The Texas JUA is financially the strongest.

## Additional Findings

Other findings include:

- Market Share - The market share for most JUAs did not change significantly between 1987 and 1988. Seven JUAs, Florida, Kansas, Minnesota, New York, Pennsylvania, Texas and Virginia act as true residual markets. The other five are essentially the only market for individual health care providers.

**Market Share**

| JUA | 1988 | 1987 | 1986 |
|---|---|---|---|
| Florida | 11.5% | 10.5% | 10.5% |
| Kansas | 8.8 | 5.9 | 3.1 |
| Massachusetts | 87.6 | 84.5 | 69.0 |
| Minnesota | 0.4 | | |
| New Hampshire | 63.1 | 52.5 | 53.2 |
| New York | 20.0 | 14.3 | 21.6 |
| Pennsylvania | 3.3 | 3.4 | 3.4 |
| Rhode Island | 85.1 | 75.1 | 82.6 |
| South Carolina | 55.4 | 53.7 | 47.0 |
| Texas | 8.8 | 9.9 | 13.2 |
| Virginia | 3.3 | | |
| Wisconsin | 38.7 | 46.8 | 34.8 |

- Investment Yields. The investment yields were generally higher in 1988 than in 1987.

**Investment Yields**

| JUA | 1988 | 1987 | 1986 |
|---|---|---|---|
| Florida | 7.9% | 8.4% | 8.7% |
| Kansas | 5.3 | 5.2 | 6.0 |
| Massachusetts | 7.6 | 7.9 | 9.4 |
| Minnesota | 7.8 | | |
| New Hampshire | 8.8 | 7.3 | 7.8 |
| New York | 9.2 | 8.4 | 8.5 |
| Pennsylvania | 7.4 | 7.1 | 7.7 |
| Rhode Island | 8.0 | 7.6 | 8.7 |
| South Carolina | 8.0 | 7.9 | 10.6 |
| Texas | 8.1 | 8.2 | 9.0 |
| Virginia | 8.3 | | |
| Wisconsin | 7.8 | 7.1 | 8.5 |

- Cash Flow - All JUAs reporting 1988 data had positive cash flow.

**Cash Flow ($ in Millions)**

| JUA | 1988 | 1987 | 1986 |
|---|---|---|---|
| Florida | $9.6 | $9.0 | $13.3 |
| Kansas | 0.5 | (0.5) | (1.9) |
| Massachusetts | 136.6 | 94.8 | 11.4 |
| Minnesota | 0.5 | 0.3 | |
| New Hampshire | 10.6 | 8.4 | 6.9 |
| New York | 117.1 | 71.7 | 30.5 |
| Pennsylvania | 4.6 | 4.2 | 3.5 |
| Rhode Island | 22.0 | 15.7 | 13.4 |
| South Carolina | 4.6 | 5.8 | 0.6 |
| Texas | 4.4 | 3.9 | 9.7 |
| Virginia | 2.8 | 1.9 | |
| Wisconsin | 8.9 | 12.1 | 4.8 |

# Introduction

In response to the medical malpractice crisis of the mid-1970's, many states enacted laws allowing the insurance commissioner to establish a joint underwriting association (JUA) if the commissioner deemed the JUA necessary in order to provide medical malpractice coverage for health care providers. Ten of the medical malpractice JUAs established in the late 1970's still offer coverage to health care providers. These JUAs exist in Florida, Kansas, Massachusetts, New Hampshire, New York, Pennsylvania, Rhode Island, South Carolina, Texas and Wisconsin. The market shares for these JUAs range from 3% to more than 80%. Virginia, Minnesota, and Puerto Rico established or activated medical malpractice JUAs in 1985 and 1986. Although it is too early to analyse their financial condition, information on the Minnesota and Virginia JUAs are presented in this report.

When the National Coordinating Committee on Medical Malpractice JUAs was reactivated in 1985, one of its main concerns was the financial strength of the medical malpractice JUAs. All states except Kansas and Pennsylvania currently have provisions to assess insurers to cover unfunded JUA liabilities. A review of the JUA 1988 statutory results below illustrates the potential magnitude of the possible assessments. The deficits ranged from more than two hundred thousand to one billion dollars.

In response to this concern, the Committee created the Financial Data Subcommittee charging it with the responsibility of collecting data on the financial condition of each medical malpractice JUA and issuing a report accurately reflecting each JUA's financial condition.

After reviewing existing public documents including annual statements and financial reports, the Subcommittee concluded that additional data was needed to fulfill its charge. To this end, the Subcommittee designed a survey to collect data regarding historical claim payments, anticipated reserve runoff, reserve development, claim detail, investment data, and rate filing history in addition to selected annual statement data items. The form has been sent to each of ten JUAs on four different occasions. Minnesota and Virginia participated in the latest two efforts.

In this latest effort, nine JUAs, Florida, Massachusetts, Minnesota, New Hampshire, New York, Rhode Island, South Carolina, Texas, and Virginia completed and returned the entire questionnaire. For various reasons, two JUAs, Kansas and Pennsylvania, supplied only annual statement data. Wisconsin supplied annual statement data and some additional data. This report analyses the data from the fourth request and includes the exhibits from the prior year.

**Statutory Balance Sheet for Medical Malpractice JUAs ($ in thousands)**

| State | Statement Date | Assets | Liabilities | Statutory Surplus |
|---|---|---|---|---|
| Florida | 12/88 | $ 69,384 | $ 69,384 | $ 0 |
| Kansas | 6/88 | 9,018 | 9,018 | 0 |
| Massachusetts | 12/88 | 574,179 | 1,097,970 | (523,791) |
| Minnesota | 12/88 | 829 | 1,004 | (175) |
| New Hampshire | 12/88 | 55,396 | 85,663 | (30,267) |
| New York | 12/88 | 728,517 | 1,731,175 | (1,002,658) |
| Pennsylvania | 12/88 | 63,165 | 60,219 | 2,946 |
| Rhode Island | 12/88 | 110,391 | 277,155 | (166,764) |
| South Carolina | 6/88 | 34,407 | 49,046 | (14,639) |
| Texas | 12/88 | 133,065 | 133,065 | 0 |
| Virginia | 12/88 | 7,684 | 4,973 | 2,711 |
| Wisconsin | 12/88 | 94,072 | 111,511 | (17,439) |

The analysis for each JUA concentrates on:

- Assets - including portfolio mix, investment quality, yield, and bond maturity.

- Cash Flow - including income and expenditure components.

- Statutory Reserve - including pending claim reserves (reserves for claims actually reported to the JUAs, but not yet settled) IBNR claim reserves (reserves for claims not yet reported to the JUA), loss adjustment expense reserves, pending claims, average pending claim size, and developed reserve as of the latest valuation date.

- Discounted Loss and Loss Adjustment Expense Reserves - including comparison to invested assets, and an estimate of when invested assets can be expected to be exhausted if (1) the discounted reserve is larger than the invested assets and (2) the JUA has no additional income. The latter assumption is not realistic for an ongoing JUA but is used to illustrate how long a JUA could pay claims before exhausting current assets if it stopped issuing policies as others have done in the past.

- Rate Filing History - including a comparison of requested rate changes to approved rate changes.

The most critical part of the analysis is the discounting of loss and loss adjustment expense reserves. Discounting provides an estimate of the current amount of funds which if invested will be sufficient to pay current liabilities as they become payable in the future. If the discounted value is less than current funds, all future payments can be expected to be made. If the discounted value is greater than current funds, funds can be expected to be exhausted before all claims are paid. In the latter case, insurers may have to provide the additional money to pay the claims.

Four critical assumptions are inherent to discounting. The discounting assumptions are:

- The total loss and loss adjustment expense reserve is adequate. This may be an optimistic assumption given that, at least until recently, initial reserves have proved to be inadequate. If current reserves are inadequate, the discounted value of the future payments is understated.

- The reserve runoff will occur as predicted. If claims are paid sooner than expected, the discounted reserve will be understated.

- The embedded yield (weighted average investment return) on the bond portfolio will be obtained throughout the runoff period. For most states the current embedded yields are 7%-8%. The bonds for most JUAs will mature before the funds are needed to pay claims. The funds, therefore, will have to be reinvested. If the yields then available are less than current embedded yields, the JUAs will not be able to reinvest the funds at rates sufficiently high enough to maintain the current embedded yield. If the JUAs cannot maintain their current embedded yields, the discounted reserve will be understated.

- The JUA will be able to obtain full value for its bonds. For most JUAs, bond maturity is sooner than when liabilities are due. Over the next two or three years most JUAs should receive full value for their current bond holdings. If JUAs reinvest in securities that mature as liabilities fall due, they should receive the full value of their investments. If they reinvest at maturities beyond when liabilities are due, they may have to sell securities at less than their full value. The discounting assumes bond maturity will match when liabilities are due.

Understated discounted reserves will have a negative impact on results. If a JUA appears to have sufficient funds to pay claim liabilities, the funds may not be sufficient if discounted reserves are understated. If a JUA appears to have insufficient funds to pay claim liabilities,

the deficiency will be larger if discounted reserves are understated.

The discounted reserve is compared to invested assets in order to determine if assets on hand are sufficient to meet future payments on current claims. Other assets exist, usually premium balances and accrued interest which, when received, would be available for investment purposes or the payment of claims. Invested assets are used because they represent funds the JUAs actually hold.

The remainder of the report contains three sections. Immediately following is the detailed analysis of each JUA. This section contains a separate analysis of each JUA. The next section contains exhibits displaying the 1988 data referred to in the first section. Each exhibit contains data for all JUAs in order to facilitate comparisons. The last section contains exhibits from the third study displaying 1987 data.

# Florida Medical Malpractice JUA

## History

The Florida JUA was activated July 1, 1975. Members include all liability insurers, medical malpractice insurers, and certain self-insurers. The JUA was established to provide coverage for all health care providers. Occurrence and claims-made "tail" coverages are offered. The JUA currently has 11.5% of the medical malpractice market share based on premiums (Exhibit 1) which is up about one percentage point from 1987.

## Funding and Deficit Provisions

Funds for the JUA come from 1) policyholder premiums, 2) policyholder assessments, and 3) member assessments. If a deficit occurs, policyholders could be assessed up to one-third of their annual premium. Based on 1988 premium this assessment would be $6.4 million. If this assessment is not sufficient to cover the deficit, insurer members are assessed based on their total premium volume in the state. There is no provision for the insurers to recoup their assessment.

## Balance Sheet

As of year-end 1988, the Florida JUA balance sheet showed assets and liabilities of $69.4 million resulting in no surplus. (See Exhibit 2). These figures are up almost 15% from 1987. The Florida JUA accounting procedures are unique in that the unearned premium reserve includes not only the traditional unearned premium reserve but also any refund due the policyholders or any deficit accrued by the JUA. As of year-end 1988, the unearned premium reserve was a negative $28.5 million. As a result, the JUA always has a surplus of zero. These accounting principles are prescribed by the insurance department.

## Assets

Of the $69.4 million in assets, $67.2 million is invested. (See Exhibit 3). Of this amount, $46.2 million is invested in bonds while $18.4 million is in short term investments. The balance, $2.6 million, is held in cash. The bonds have an embedded (weighted average) yield of 7.9%, which is down slightly from 1987. Most of the bonds, $37.1 million, are government bonds. Average bond maturity is 1.6 years. The balance of $9.1 million is non-governmental bonds. Of this amount all but $1.5 million is rated A or better. Premium balances, $1.4 million, and interest income due and accrued, $0.8 million, comprise the non-investment assets.

## Cash Flow

In 1988, the Florida JUA had a $9.6 million positive cash flow (Exhibit 4) which was up from the $9.0 million in 1987. The increase is due to expenditures declining more than income declined. JUA income totaled $23.3 million ($26.2 million in 1987) with $19.2 million from premiums ($22.2 million in 1987) and $4.1 million from investment income ($4.0 million in 1987). Expenditures were $13.7 million ($17.2 million in 1987) of which $7.2 million went for claim payments ($9.7 million in 1987), $4.7 million went for loss adjustment expenses ($5.3 million in 1987) and $1.8 million went for other expenses ($2.2 million in 1987).

## Statutory Reserves

As of year-end 1988, the JUA reported loss and loss adjustment expense reserves of $96.1 million (Exhibit 5), up 10% from 1987. Of this amount $68.9 million was for claim reserves, and $27.2 million was for loss adjustment expense reserves. Claim reserves are up 6%, while loss adjustment expenses are up 21%. The claim reserve is comprised of two segments - $28.2 million for pending claims (i.e., claims reported to the JUA that are not yet settled), $40.7 million is for IBNR claims (injuries that have occurred but which have not been reported to the JUA as of year-end 1988). The 1988 IBNR reserve is up 18% from 1987. The pending reserve is down 7% from 1987.

## Reserve Development

In 1988, reserves for claims incurred prior to accident-year 1988 were decreased $2.7 million but this was the result of both increases and de-

creases to prior year reserves. (See Exhibit 7A). Reserves for accident-years prior to 1987 were increased $4.9 million. The reserve for accident-year ending 1987 was decreased $7.6 million.

One possible reason for the decrease is that since 1985 actual loss and loss adjustment expenses paid have been less than expected. At year-end 1985, $32.0 million in loss and loss adjustment expenses were expected to be paid during the three year period 1986, 1987, and 1988 for claims which had occurred in 1985 and prior. During these three years, $28.6 million was actually paid or about 10% less than expected. (See Exhibit 8).

Accident-year reserve developments in Florida have been very unusual compared to other JUAs studied in that the original accident-year reserves have ranged from $7.6 million too high to $14.2 million too low. There has also been substantial fluctuations from year to year in the size of the developed accident-year reserve. A developed accident-year reserve is the accident-year reserve that would have been established at the end of the accident-year if what is known now about actual payments and current reserve estimates had been known at the time the accident-year reserve was established. The developed accident-year reserve is the sum of the payments since the end of the accident-year for claims incurred in the accident-year plus the current reserve on claims incurred in the accident-year.

For the first year, 1976, the developed reserve is estimated to be $7.4 million. The developed accident-year reserve fell for the next two years to $6.4 million and then rapidly increased over the next four years to $18.6 million in 1982. Subsequently, the developed accident-year reserve fell to $8.5 million in 1985, increased in 1986 to $13.4 million, and almost tripled to $35.6 million in 1987. A detailed analysis of the number of claims, number of insureds, and the size of the claims for each of those years would be necessary in order to understand this substantial variation in the developed accident-year reserves.

## Claim Payout

The time to pay half of the ultimate incurred losses (the total amount expected to be paid for any accident-year) in Florida remained unchanged in 1988 at 3.2 years, and is still the shortest of any state offering occurrence policies. (See Exhibit 9). Up until 1987 the JUA expected all claims from any one accident year to be paid within 10 years. In 1987 they changed this assumption and now expect all such claims to be paid within 12 years.

## Discounted Reserves

With $67.2 million in invested assets and $96.1 million in outstanding claims, it would appear that the JUA does not have sufficient funds to meet its obligations. This does not take into consideration the investment income to be earned on the invested assets.

Assuming (1) the current reserve estimate is adequate, (2) the estimated runoff pattern is reasonably accurate, (3) investments will continue to earn their current rate, and (4) full value of the invested assets will be received if forced to sell before maturity, an estimate of how much has to be set aside today in order to meet those loss payments and loss adjustment expense payments can be made. The amount to set aside, or present value, is $77.7 million or $10.3 million more than the invested assets. (See Exhibit 10). It would appear, therefore, that even if all the assumptions prove to be accurate, invested assets in the Florida JUA are insufficient to meet future payment obligations. This deficit is the same as that estimated last year. Without using future premiums, which are for claims incurred in the policy years for which the premiums are collected and using the same four assumptions above, the current invested assets could be depleted by 1993. (see Exhibit 11). As long as cash flow remains positive, however, the JUA will be able to meet its obligations.

If these assumptions do not hold, the JUA deficit could be larger. For instance, if reserves prove to be inadequate by as little as 10% (the amount reserves were strengthened in 1986), the $10.5 million deficit increases to $18.3 million.

## Rate Filing

Up until 1986, the Florida JUA had always received requested rate changes. (See Exhibit

12A). For the years 1979 and 1980 physician and surgeon rates decreased, but those rates increased annually from 10% for 1981 to 77.6% for 1984. For 1985, the filed and approved rate increase was 46.4%. For 1986, a 94% increase was requested for dentists, but no increase was approved. For 1987, a 20% increase was requested but only 10% was approved. For 1988, a 21% increase was requested and approved. The rate filing history for hospitals and other facilities is similar to that for physicians. Rates decreased between 1978 and 1980 and then increased substantially. For 1987, a 57% increase was requested, but only 14% was approved. For 1988, a 98% increase was requested but only 66.7% was approved.

## Conclusion

The financial condition of the Florida JUA remained unchanged. Considering investment income, a $10.5 million deficit existed at year-end 1988. Even if JUA policyholders were assessed the maximum one-third of their annual premium, a deficit of $4.1 million would exist. The $4.1 million could be assessed against the insurance industry.

# Kansas Medical Malpractice JUA

## History

The Kansas JUA became operational July 1, 1976. Members include all liability insurers. The JUA was established to provide insurance to all health care providers in the state. Only claim-made coverage is offered. The JUA currently writes about 9% of the medical malpractice market based on premium volume. (See Exhibit 1).

## Funding and Deficit Provisions

Funding is from three sources: 1) policyholder premiums, 2) Health Care Stabilization Fund, and 3) taxpayers. If a deficit occurs in the JUA, the Health Care Stabilization Fund, financed through surcharges on health care provider annual medical malpractice premiums, is responsible for the deficit. If the Health Care Stabilization Fund cannot cover the deficit, the state general fund is to cover the deficiency. Any amount transferred from the state to the fund is supposed to be repaid. To date, the Stabilization Fund has had sufficient funds to meet the JUA deficit. This study did not collect financial information on the Stabilization Fund.

## Balance Sheet

For the fiscal year ending June 30, 1988, the JUA reported assets of $9.0 million with an equal amount of liabilities. (See Exhibit 2). The JUA accounting practices report as an asset the money due from the Stabilization Fund in the case of a deficit. In the case of a surplus, the surplus is listed as a liability due the Stabilization Fund. As a result, the surplus is always zero. As of fiscal year-end 1988 the JUA owed the Stabilization Fund $1.1 million.

## Assets

The JUA invests $8.8 million of the $9.0 million in assets. (See Exhibit 3). About $8.1 million is invested in short-term treasury notes with the balance of $0.7 million held in cash. The invested assets had a yield of 5.3%.

## Cash Flow

Cash flow was a positive $0.5 million for the year ending June 30, 1988. (See Exhibit 4). Income from all sources amounted to $4.0 million with $3.5 million from premiums and $0.5 million from investment income. Expenditures amounted to $3.5 million of which $1.6 million went for paid claims, $0.6 million went for loss adjustment expenses, and $1.3 million went for operating expenses.

## Statutory Reserves

The $5.3 million loss and loss adjustment expense reserve is comprised of $4.0 million for loss reserves and $1.4 million for loss adjustment expense reserves. (See Exhibit 5). The loss reserves, in turn, are comprised of $3.7 million for pending claims and $0.3 million for IBNR claims. The low IBNR value is due to the fact that the JUA only offers claims-made policies. The average reserve value is $39,000.

## Pending Claims

Typically, under an occurrence policy medical malpractice claims are reported well after the time when the medical procedure responsible for the injury took place. Consequently, the number of pending claims for recent years is usually less than the number of pending claims for earlier years. The highest number of pending claims is usually for the year three or four years prior to the current year. The number of pending claims for even earlier years usually declines steadily.

This description of the usual pending claim pattern does not hold for the 96 claims in Kansas. The number of pending claims is highest in the most recent year, 1988. The number of pending claims rapidly declines for earlier years, which is typical of claims-made policies. (See Exhibit 6).

## Reserve Development

For eight of the eleven accident-years since inception, reserves have been redundant. (See Exhibit 7B). For accident years 1977-1979,

1983, and 1986 the original reserves were between $200 and $400 thousand too high. For 1984 the redundancy was $650 thousand, and for 1985 the redundancy was $1.4 million. For 1987 the redundancy was $1.0 million. Reserve deficiencies of $200 thousand exist for accident-years 1980 and 1981. Despite the recent Kansas Supreme Court decision ruling medical malpractice tort reforms unconstitutional which could have an adverse impact on reserve developments, reserves for accident years prior to 1988 were reduced $1.9 million in 1988.

## Claim Payout

Because only claims-made coverage is offered, the amount of time to pay half of the ultimate incurred losses is much shorter in Kansas than in other states, 1.4 years versus up to 9 years. (See Exhibit 9). Such a comparison, however, is misleading. With occurrence coverage, the time measured is from when the injury occurs while with claims-made coverage, the time is measured from when the injury is reported to the JUA.

## Discounted Reserves

The discounted reserve calculated using the aforementioned runoff pattern and the invested asset yield of 5.3% is $4.7 million or $4.1 million less than the invested assets. (See Exhibit 10). This surplus is in sharp contrast to the small deficit estimated to exist at June 30, 1987. The difference is due to invested assets increasing $3.0 million and claim reserve declining $1.0 million.

## Conclusion

As long as the Health Care Stabilization Fund continues to cover the JUA's deficit, the JUA should be able to meet its obligations. As presently structured, insurers are not subject to assessment even if the JUA and/or the Stabilization Fund should encounter financial difficulty.

# Massachusetts Medical Malpractice JUA

## History

The Massachusetts JUA became operational June 19, 1975. Membership includes all personal liability insurers, including motor vehicle insurers and multiple-peril writers. The JUA offers coverage to all physicians, hospitals, and other health care providers. Both occurrence and claims-made coverage are offered with two-thirds being occurrence and one-third being claims-made. The JUA wrote $87.6% of the medical malpractice coverage in the state in 1988 (Exhibit 1), up from 84.5% in 1987.

## Funding and Deficit Provisions

Funding is provided from policyholder premiums and member assessments. If a deficit occurs in the JUA, a pro-rata assessment based on total member premiums, up to a maximum of 1% of the insurer's surplus, can be assessed. A recoupment provision provides that insureds covered by any medical malpractice liability policy issued in the state can be assessed or can have their premiums increased in order to reimburse insurers for their JUA assessment.

## Balance Sheet

As of year-end 1988, the Massachusetts JUA reported assets of $574.2 million and liabilities of $1.1 billion, resulting in a deficit of $523.8 million. (See Exhibit 2). Assets increased 24% from 1987 while liabilities decreased 12%. The deficit decreased $261 million during 1988.

## Assets

Of the $574.2 million in assets, $510.9 million is invested. (See Exhibit 3). More than $476.1 million is invested in bonds, $33.5 million is invested in short-term securities, and $1.3 million is held in cash. Non-invested assets amount to $63.3 million of which $50.2 million is in premium balances and $13.1 is due from interest income accrued. The large amount in premium balances is due to difficulties in collecting the rate increases on policies written in 1985 and 1986. Bond maturity averages 9.3 years. The overall investment yield (investment income divided by invested assets) is 7.6% down from 7.9% in 1987.

## Cash Flow

Cash flow increased substantially in 1988 (Exhibit 4), rising from $94.8 million in 1987 to $136.6 million in 1988. Increasing premiums due to rate increases accounted for most of the increased cash flow. Premium income increased $39.5 million from $149.0 million in 1987 to $188.5 million in 1988. Income from investment income was up $8.4 million from $30.6 million in 1987 to $39.0 million in 1988. Expenditures amounted to $94.4 of which $61.1 million went for claim payments, $17.2 million went for loss adjustment expenses, and $16.1 million went for operating expenses. Corresponding 1987 figures were lower, claim payments $58.5 million, loss adjustment expense $14.2 million, operating expense $12.1 million. For 1988, the $136.6 positive cash flow does not take into consideration $1.3 million is net realized capital losses. The Massachusetts JUA was the only JUA, except for New York, to have realized capital gains of more than a few hundred thousand dollars. Realized capital gains are not reflected in this cash flow analysis because they are one-time occurrences and cannot be relied upon from year to year. For instance, net realized capital gains were $18.7 million in 1986, $3.0 million in 1987, and negative in 1988.

## Statutory Reserves

The JUA reports $1.0 billion in loss and loss adjustment expense reserves as of year-end 1988. (See Exhibit 5). Of this amount, $728.1 million is for loss reserves and $276.8 million is for loss adjustment expense reserves. Loss reserves are down 12.5% from 1987, while loss adjustment expense reserves are down 17%. The loss reserves are comprised of $383.0 million for pending claims and $345.6 million for IBNR claims. The reserve for pending claims is up 9% while the reserve for IBNR claims is down 28%. See discussion below in Reserve De-

velopment for one explanation of why reserves have been lowered.

### Pending Claims

The Massachusetts JUA has the largest number of pending claims, 4,016. Because the JUA sells claims-made coverage, many claims are from recent accident years. The JUA still has 186 claims covered by occurrence policies issued prior to 1980. (See Exhibit 6).

### Reserve Development

From 1976 to 1982 the original accident year reserves have proven to have been substantially understated. (See Exhibit 7C). In two years, 1980 and 1982, the original reserves were less than half what they should have been. Since 1983 the reverse appears to be true, the original accident year reserves have been substantially more than needed. Most overstatements have been in the range of 30% to 40%.

One reason for what now appears to be earlier overestimates of loss and loss adjustment payments is that actual payments for the last three years have been substantially less than expected. (See Exhibit 8). Applying the 1988 expected reserve payout pattern to the year-end 1985 loss and loss adjustment expense reserve, $280 million would have been expected to have been paid in 1986, 1987, and 1988. The actual payments during those three years for claims incurred prior to 1986 were only $198 million or 71% of the expected.

The fact that actual payments have been less than expected payments was one of the reasons that the JUA lowered its loss and loss adjustment expense reserves in 1988. Another reason was that not as many new claims as expected were reported.

### Discounted Reserves

The $523.8 million statutory deficit does not take into consideration investment income that will be earned on currently invested assets. Assuming (1) the current reserve estimates are adequate, (2) the estimated runoff pattern is reasonably accurate, (3) the invested assets will continue to earn at their current embedded yield, and (4) asset maturity will match liabilities, the amount of money needed at year-end 1988 to meet future claim payments is $696.2 million. (See Exhibit 10). This is $185.3 million more than currently invested assets. With this shortage, invested assets would be depleted sometime during 1995. (See Exhibit 11). As long as cash flow remains positive, however, the assets will not be depleted. While the amount is substantially less than the estimated shortage at year-end 1987, $430.0 million, the current estimated shortage is equal to the 1988 premium volume.

If the above assumptions are not accurate, the shortage could be even larger. For example, if reserves are 10% inadequate, the shortage would be $255.0 million

### Rate Filings

Prior to 1983, the JUA received 3 rate increases, 7.3% for 1977, 10% for 1980, and 9.1% for 1982. (See Exhibit 12B). For 1983, the JUA requested a 162% increase and received approval for 42%, which was appealed. Subsequently, the JUA refiled for a 188% increase for 1983 and also filed for a 41.6% increase for 1984. In June 1986, the JUA received approval for a 68.1% increase for 1983 and 10.9% for 1984. These increases are to be collected over a 5 year period which began in July 1987. The JUA filed for a 71.6% increase for 1985 and received approval for 23.6% in March 1987, also to be collected over a five year period. For 1986, the JUA requested a 10.3% increase and received approval for 8.7% in March 1987. Also in March 1987, the JUA received a 6.5% rate increase for 1987 rates after requesting 10.0%. For 1988, the requested 8.6% rate increase was denied.

### Conclusion

Even considering future investment income and lower claim reserves, the Massachusetts JUA has a deficit of at least $185.4 million and possibly much more. Sooner or later this unfunded liability will have to be paid. If the JUA is unable to raise this money from policyholders, the members of the JUA could be assessed millions of dollars. Whether rate increases can be implemented to allow insurers to recoup the assessments is yet to be determined.

# Minnesota Medical Malpractice JUA

## History

The Minnesota JUA was authorized in 1976 but was not activated until late in 1985. Members include all insurers authorized to write personal injury liability insurance in Minnesota. The JUA was established to provide medical malpractice coverage for all health care providers. While the JUA initially issued a few occurrence policies, only claims-made policies are currently issued. In 1988, the JUA wrote less than 1% of the medical malpractice insurance in the state based on premiums. (See Exhibit 1).

## Funding and Deficit Provisions

Funds for the JUA come from (1) policyholder premiums, (2) the Stabilization Reserve Fund, and (3) member assessments. Funding for the Stabilization Reserve Fund comes from a surcharge on policyholder premiums. If the JUA has a deficit, the Stabilization Reserve Fund is to provide funds to cover it. If those funds are insufficient, members of the JUA can be assessed. Insurers may recoup any assessment by means of either a 2% surcharge on the annual premiums on future policies offering the kinds of coverage which provide the basis for the members' participation in the association, or through a premium tax offset.

## Balance Sheet

At year-end 1988, the Minnesota JUA reports assets of $829,000 and liabilities of $1,005,000 for a deficit of $175,000. (See Exhibit 2). The Minnesota JUA is the smallest of all the currently active JUAs.

## Assets

Of the $829,000 in assets, $826,000 are invested. (See Exhibit 3). The JUA has not invested in any securities, rather $590,000 is held in cash. The remaining $236,000 in assets is from the Stabilization Reserve Fund.

## Cash Flow

Cash flow in 1988 was a positive $452,000. (See Exhibit 4). Premium amounted to $511,000, investment income $24,000. Expenditures were $83,000 of which $76,000 went for operating expenses. No claims were paid in 1988. Loss adjustment expenses paid were $7,000.

## Statutory Reserves

Loss and loss adjustment expense reserves amount to $570,000. (See Exhibit 5). Loss adjustment expense reserves are included with the loss reserves and, therefore, no breakout of these components is available. Pending reserves amount to $261,000 while the IBNR reserve is $309,000.

## Pending Claims

At year-end 1988, the Minnesota JUA had four pending claims. (See Exhibit 6). Two date from 1986 and one each from 1987 and 1988.

## Reserve Development

No reserve development is possible since the JUA has had only four claims and none has been paid.

## Rate Filings

Initial rates for the JUA were set slightly higher than those in the private market.

## Conclusions

The Minnesota JUA has not been in existence long enough nor is it large enough to determine its financial condition. If just one of the pending claims settles for $1.0 million, however, the JUA will not have the funds to pay it. The JUA appears to be operating as a residual market given the low market share.

# New Hampshire Medical Malpractice JUA

## History

The New Hampshire Medical Malpractice JUA began operating October 1, 1975. Members include all liability insurers in New Hampshire. The JUA was established to provide coverage for physicians, hospitals, and other health care providers. Occurrence policies have been offered since the beginning and claims-made since 1986. In 1988, the JUA wrote an estimated 63.1% of the medical malpractice market based on premium volume. (See Exhibit 1). The market share was up from 52.5% in 1988. The JUA underwrites almost all the medical doctors but few hospitals and other health care providers.

## Funding and Deficit Provisions

Funding is provided from (1) policyholder premiums, (2) member assessments, (3) policyholder surcharges, and (4) a Stabilization Reserve Fund.

Legislation, effective in 1986, altered the funding mechanism for covering JUA deficits. The legislation established two funding mechanisms, one for deficits from business written after January 1, 1986, and another for deficits on business written prior to January 1, 1986.

For deficits on business written after January 1, 1986, members will be assessed based on the percentage of premium they write in the state. The companies, however, may be reimbursed under one of two plans approved by the commissioner. One plan allows insurers to surcharge all health care providers up to a maximum of 100% of their premium for each policy year. In the event the assessment is greater than $10,000, the payment may be applied over a period of up to three years. The second option would allow insurers to surcharge future liability insurance policies which form the basis of the member's participation in the JUA provided that the surcharge does not exceed 3% of the premium per year. When the Insurance Commissioner attempted to implement the second option in 1987, a lawsuit was brought challenging implementation. The issue is currently being litigated.

A Stabilization Reserve Fund is created for deficits prior to January 1, 1986. Initial funding for the Stabilization Reserve Fund comes from a surcharge of 15% on the annual gross premium charged for primary medical liability coverage. If the Stabilization Reserve Fund reserve is not sufficient to cover the deficit, the commissioner shall impose a surcharge not to exceed 2% of the annual premium on policies issued or delivered in the state for the lines of business which form the basis for the insurer's participation in the JUA.

## Balance Sheet

As of year-end 1988, the JUA reported assets of $55.4 million, liabilities of $85.7 million with a resulting deficit of $30.3 million. (See Exhibit 2). Assets are up $10.8 million from 1987. Liabilities are up $12.9 million compared to 1987 resulting in the deficit increasing $2.1 million from 1987.

## Assets

Of the $55.4 million in assets, the JUA invested $51.6 million. (See Exhibit 3). The investments include $45.6 million in bonds and $2.3 million in short-term investments. The remaining $3.7 million is held in cash. Of the $3.8 million not invested, $1.4 million is in premium balances and $2.2 million in other non-invested assets. The embedded yield on invested assets is 8.8%. The average maturity for bonds is 4.6 years.

## Cash Flow

In 1988, the cash flow was a positive $10.6 million (Exhibit 4) up from $8.4 million in 1987. Total income amounted to $22.1 million with $18.6 million from premiums and $3.5 million from investment income. Total expenditures were $11.6 million of which $7.6 million went for claim payments, $2.6 million went for loss adjustment expense payments, and $1.4 million went for operating expenses. The $3.4 million increase in income more than offsets the $1.3 million increase in expenditures resulting in the $2.2 million increase in cash flow.

### Statutory Reserves

Of the $85.7 million in liabilities, $71.7 million is for loss and loss adjustment expense reserves. (See Exhibit 5). Loss reserves amounted to $55.3 million while loss adjustment expense reserves amounted to $16.5 million. The total, $71.7 million is up 15% from 1987.

### Pending Claims

At year-end 1988, the New Hampshire JUA had 382 pending claims (Exhibit 6) up 13% from 338 pending at year-end 1987. The largest number of claims, 65, are pending from 1987 and reflect the 1986 introduction of claims-made policies.

### Reserve Development

The JUA was not able to supply the usual reserve development data. The data were sufficient, however, to determine that since 1985 the JUA has paid somewhat more than expected. (See Exhibit 8). At year-end 1985, the JUA expected to pay $22.1 million during the next three years on claims originating from 1985 and prior. During those three years the JUA actually paid $25.8 million or 17% more than expected.

### Claim Payout

The amount of time to pay one-half the ultimate incurred losses is 5.5 years. (See Exhibit 9). This is up from 5.2 years last year. In 1986, the JUA extended its estimate of how long it will take to ultimately pay all claims for any one accident-year from 15 to 20 years. This change didn't materially affect the time to pay one-half the ultimate incurred loss.

### Discounted Reserves

Of primary importance to the financial strength of the JUA is whether the current invested assets of $51.6 million along with the investment income they will generate are sufficient to meet the estimated $71.7 million in claim payments and loss adjustment expenses expected to be made in the future. Assuming (1) current reserves are adequate, (2) the estimated runoff pattern is reasonably accurate, (3) current invested assets will continue to earn at their current rate, and (4) full value will be received for invested assets if they are sold, $46.8 million would be needed to be set aside in order to make those payments. (See Exhibit 10). With $51.1 million in available funds, the JUA appears to have sufficient funds to meet those payments.

The $4.8 million surplus could be less if reserves prove to be adequate or claims are settled sooner than expected. If reserves are inadequate by 20%, a shortage of $4.5 million would exist.

### Rate Filings

Since inception, the JUA has filed for several rate increases and has received timely approval in every case except for 1986. (See Exhibit 12C). Rates have grown substantially for all insureds since 1980. For physicians and surgeons, rates increased 45% for 1980, 50% for 1981, 70% for 1982, 30% for 1983, with a more moderate increase for 1984. For 1986, the JUA filed a 9.6% increase, but the request was refused. For 1987, 12.2% was filed and approved. For 1988, 8.9% was filed and approved.

### Conclusions

With partial success in recent actions taken to address deficit problems and considering future investment income, the JUA has sufficient funds to meet its obligations, Recent adverse reserve development for early years, however, could indicate additional problems that could result in a deficit. If the JUA is ultimately successful in its efforts to reduce the deficit on policies written prior to 1986 through assessments, insurers may not be responsible for that deficit.

# New York Medical Malpractice JUA

## History

The New York Medical Malpractice JUA was activated June 18, 1975. Members include all insurers writing personal liability and multi-peril policies. The JUA offers occurrence coverage and since 1986 claims-made coverage to physicians and hospitals. The JUA wrote 20.0% of the medical malpractice premiums in the state in 1988 (Exhibit 1), which is up from the 19.3% share in 1987.

## Funding and Deficit Provisions

Three sources provide funds: (1) policyholder premiums, (2) Stabilization Reserve Fund, and (3) member assessments. The Stabilization Reserve Fund is financed by a 20% surcharge on the insured's medical malpractice premiums. If the JUA sustains a deficit, the Stabilization Reserve Fund is to cover the deficit. If a deficit exists after consideration of the Stabilization Reserve Fund contribution, JUA members can be assessed in proportion to their premiums. The assessment can be subsequently recouped from the Stabilization Reserve Fund if those funds are replenished.

## Balance Sheet

As of year-end 1988, the New York JUA balance sheet shows assets, including Stabilization Reserve Fund assets, of $728.5 million and liabilities of $1.7 billion for a deficit of $1.0 billion. (See Exhibit 2). The deficit increased almost $230 million because assets increased $150 million, while liabilities increased $380 million. The deficit increase would have been even larger if loss reserves and loss adjustment expense reserves for accident-years prior to 1988 had not been reduced by over $118 million in 1988. (See Reserve Development below).

## Assets

Of the total assets, $566.2 million is invested. (See Exhibit 3). Bonds constitute the largest investment, $517.2 million. The embedded yield increased from 8.4% in 1987 to 9.2% in 1988. The average term to maturity of all bonds is 16.7 years. Short-term investments amount to $48.5 million while $0.5 million is held in cash. Non-invested assets amount to $162.3 million of which $152.3 million is in premium balances. Almost all of this amount is for excess limits coverage provided, but collecting the premium was slow during 1988, and a substantial amount was still outstanding late in 1988. Of the remaining non-invested assets, most is in interest income due and accrued.

## Cash Flow

Cash flow in 1988 was a positive $117.1 million (Exhibit 4), up more than $45 million from 1987. Premium income was up $39.7 million from $61.1 million in 1987 due to collecting a large amount of the uncollected premium at year-end 1987. Investment income was up $10.6 million from $33.3 million in 1987 to $43.9. Other income increased from $2.5 million in 1987 to $4.0 million in 1988. The total cash income, excluding capital losses was $148.6 million. Expenditures amounted to $31.5 million, up from $25.2 million in 1987. Paid claims amounted to $20.1 million, up from $13.8 million in 1987 with loss adjustment expenses of $9.7 million, up from $9.2 million in 1987. Other expenses were down from $2.1 million in 1987 to $1.7 million in 1988.

## Statutory Reserves

As of year-end 1988, the JUA reported loss and loss adjustment expense reserves of $1.6 billion (Exhibit 5), a 29% increase over 1987. Of this amount, $1.2 billion is for loss reserves (up 28% from 1987), and $388.6 million is for loss adjustment expenses (up 32% from 1987). The loss reserve is comprised of $166.0 million for pending claims, which is down from the $198.4 million at year-end 1987. All of the loss reserve increase is in IBNR which increased from $783.1 million in 1987 to $1.1 billion in 1988.

## Pending Claims

The 1,944 pending claims are down slightly from the 2,092 at year-end 1987. The average reserve value of $85,000 is down from the

$91,000 at year-end 1987. Almost half of the pending claims are for losses which occurred in 1982 and prior. (See Exhibit 6). The large number of pending claims for the earlier years indicates that it takes a longer time to settle cases in New York than in other states.

### Reserve Development

The loss reserves for accident-years 1987 and prior were reduced $118.8 million in 1988. (See Exhibit 7D). Despite this reduction, the original reserves for accident-years 1975 to 1980 are still thought to have been substantially underreserved. In the first half year of operations in 1975, the original reserve was estimated to be $8.1 million, and today it appears that it should have been set at $25.6 million. Between 1976 and 1982 the original accident-year reserves ranged from a low of $13.6 million in 1977 to a high of $42.3 million in 1980. It now looks as if all of those reserves should have been set somewhere between $42 million and $65 million. For the more recent accident-years, reserves are now estimated to have been adequate. The reserve pattern for 1983, 1984, and 1985 is unusual, in that on a developed basis, they are $46.4, $27.5, and $118.3 million, respectively. The large increase in the 1985 accident-year reserve is due to the addition of excess liability coverage.

One reason for the reserve reduction is that for the last three years actual total claim payments have been less than expected. At year-end 1985, the JUA expected to pay $175.6 million during 1986, 1987, and 1988 for claims that had occurred in 1985 and prior years. (See Exhibit 8). During these three years, only $73.2 million was paid or 41.7% of the expected. Also during this time the JUA's claim count has declined 12% from 2,206 at year-end 1985 to 1,944 at year-end 1988. If the actual claim payments continue to be less than expected and claim counts continue to decline, the JUA reports additional reserve reductions could be taken.

### Claim Payout

New York medical malpractice claims continue to have the longest anticipated runoff period. (See Exhibit 9). In 1988, the amount of time to pay one-half the claim payments is 9.0 years. By comparison, after nine years over 75% of the claim payments are expected to have been made in Florida, South Carolina and Texas.

### Discounted Reserves

The $1.0 billion deficit does not take into consideration the investment income that will be earned on currently invested assets. The long time it takes for New York claims to runoff, however, provides a considerable length of time in which to earn investment income. Assuming (1) the current reserve estimates are adequate, (2) the estimated runoff pattern is reasonably accurate, (3) the invested assets will continue to earn at their current embedded yield, and (4) asset maturity will match liabilities, the present value of those future payments is $506.2 million. (See Exhibit 10). This is $223.8 million more than the invested assets. Using the above assumptions, the invested assets can be expected to be depleted sometime during the year 1998 leaving a total of $792.7 million left to be paid. (See Exhibit 11). This is similar to the results reported at year-end 1986 when the discounted reserve was $244.8 million more than invested assets. As long as cash flow remains positive, however, the JUA will be able to meet its obligations.

### Rate Filings

The New York JUA has had an extremely difficult time receiving approval for requested rate increases. (See Exhibit 12D). For 1986, a 135% rate increase was requested, and a 9% rate increase approved. The JUA brought suit against the New York Insurance Department challenging the level of the rate increase approved. The court ruled against the Department saying the JUA was entitled to an actuarially sound rate. While the Department was analyzing the claim experience to determine an actuarially sound rate, the improved reserve development was noted. The Department and JUA agreed to 9% increases for 1986 and 1987. With continued favorable reserve development, the Department is considering a

5% increase for 1988 instead of the 77% requested by the JUA.

The rate filing for 1986 was not the first to be disapproved by the Department. No requested rate increase has ever been approved. During the period 1977 to 1985, the JUA has requested a rate increase for each year. For 1977, a 90% rate increase was requested, and a 15.5% rate increase was approved. Rate increases for 1978 through 1980 of 98%, 104%, and 186%, respectively, were all disapproved. For 1981, a 210% rate increase was requested, and a 58.5% rate increase was approved. For 1982, a 243% rate increase was requested, and a 15% rate increase was granted. For 1983, a 180% rate increase was requested, and a 83.3% increase was approved but not until January of 1985. For 1984, a 62% rate increase was requested, and a 52.3% increase was approved in January 1985. Action on the 1985 rate increase of 128% was not finalized until July 1986 when a 14% rate increase was approved.

## Conclusion

For the New York JUA, current invested assets are hundreds of millions of dollars short of paying loss and loss adjustment expense liabilities even considering future investment income. Recent reductions in actual payments relative to expected payments may reduce the indicated shortage.

# Pennsylvania Medical Malpractice JUA

## History

The Pennsylvania JUA became operational January 13, 1976. Members include all casualty insurers. The JUA offers only occurrence coverage to health care providers as defined in the statutes. The Pennsylvania JUA market share is 3.3% based on premium volume (Exhibit 1), down slightly from 1987.

## Funding and Deficit Provisions

Funding for the JUA comes from two sources, policyholder premiums and a catastrophe fund. The catastrophe fund is financed through premium surcharges on all health care providers. If the JUA incurs a deficit, the catastrophe fund or a rate increase is intended to cover the deficit. If the catastrophe fund is unable to cover a JUA deficit, a premium surcharge is to be applied to all health care providers.

## Balance Sheet

At year-end 1988, the Pennsylvania JUA reports assets of $63.2 million and liabilities of $60.2 million for a surplus of $2.9 million. (See Exhibit 2). Assets are up $5.3 million from 1987 while liabilities are up $5.4 million thus decreasing last year's surplus of $3.0 million.

## Assets

Of the $63.2 million in assets, $62.2 million is invested. (See Exhibit 3). Bond holdings total $56.6 million with an average term of 6.3 years. Short-term investments total $4.8 million. The balance, $0.8 million, is held in cash. Of the $1.0 million not invested, $0.9 million is in interest income due and accrued. The average yield on invested assets is 7.4%.

## Cash Flow

Cash flow for the JUA was a positive $4.6 million in 1988 (Exhibit 4), up from $4.2 million in 1987. The $13.3 million in income came from $8.4 million in premiums ($8.3 million in 1987) and $4.9 million in investment income ($4.0 million in 1987). Expenditures of $8.7 million ($5.2 million in 1987) included $4.2 million for claim payments, $4.1 million for loss adjustment expenses, and $0.5 million for operating expenses. Corresponding expenditures for 1987 were $4.9 million for claims, $2.6 million for loss adjustment expenses, and $0.7 million for operating expenses.

## Statutory Reserves

Loss and loss adjustment expense reserves rose from $51.2 million at year-end 1987 to $57.9 million at year-end 1988. (See Exhibit 5). Loss reserves increased 14% to $43.5 million while loss adjustment expense reserves increased 5% to $14.3 million. The loss reserves are comprised of $19.4 million for pending claims, up $2.8 million from 1987 and $24.1 million for IBNR, up $2.7 million from 1987. The pending claims had an average value of $30,800, up from $26,600 in 1987.

## Pending Claims

Pending claims distribution by accident-year is typical of occurrence coverage with half of the 629 claims pending from 1983 and earlier years. (See Exhibit 6).

## Discounted Reserves

Unique among JUAs, the Pennsylvania JUA discounts loss reserves. As of year-end 1988, the reserves were discounted at an interest rate of 6%. This would seem to be a conservative interest rate given the 7.4% yield on the $62.2 million in invested assets.

Invested assets, however, are only $4.3 million more than the discounted claim reserves. (See Exhibit 10). If reserves should prove to be 10% inadequate, the excess becomes a $1.5 million shortage.

## Conclusion

The Pennsylvania JUA has sufficient assets to meet its obligations based on conservatively discounted reserves. If reserves are understated by as little as 10%, the JUA will not have sufficient funds to meet its liabilities. The present JUA funding mechanism does not include assessing insurers.

# Rhode Island Medical Malpractice JUA

## History

The Rhode Island Medical Malpractice JUA was activated April 9, 1976. Members include all personal injury liability insurers including those insurers providing multi-peril policies. The JUA was established to provide insurance to physicians, hospitals, and other health care providers. Both occurrence and claims-made coverage are offered but all individual health care providers have chosen occurrence coverage. During 1988, the JUA's market share was 85.1% based on premiums, the second largest share of any medical malpractice JUA. (See Exhibit 1). The market share was 75.1% in 1987.

## Funding and Deficit Provisions

Funding for the JUA is from (1) policyholder premium, (2) Stabilization Reserve Fund, and (3) member assessments. The Stabilization Reserve Fund is financed by policyholder contributions determined by the director. If the JUA has a deficit, the Stabilization Reserve Fund is to provide funds to cover it. At year-end 1988, the Stabilization Reserve Fund amounted to $10.1 million. If a deficit exists after the Stabilization Reserve Fund contribution, insurers can be assessed. Individual insurer assessments will be based on the percentage of direct premiums for several lines of business as they relate to the aggregate writings in Rhode Island for all members writing those lines of business. Insurers may recoup the assessment by means of a surcharge, not to exceed 1%, on the annual premiums of future personal injury policies. Insurers may also recoup assessments through a premium tax offset.

## Balance Sheet

As of year-end 1988, the Rhode Island Medical Malpractice JUA annual statement balance sheet reports assets of $110.4 million and liabilities of $277.2 million for a deficit of $166.8 million. (See Exhibit 2). Assets increased $24.3 million while liabilities increased $31.1 million, resulting in a $6.7 million increase in the deficit.

## Assets

Invested assets amount to $101.9 million of which $89.4 million is in bonds. (See Exhibit 3). All the bonds are in government securities. All the bonds were purchased in the past five years with an average term of 4.9 years. The average yield on invested assets is 8.0%. Other invested assets include $2.6 million held in cash and $9.9 million in other unspecified assets. Of the $8.5 million in non-invested assets, $5.8 is premium balances, and $2.7 million is interest income due and accrued.

## Cash Flow

Although a large deficit exists, cash flow was a positive $22.0 million in 1988. (See Exhibit 4). Premium is up 23% from $25.7 million in 1987 to $30.8 million in 1988. Investment income is up $2.0 million to $8.1. Total cash income is up $7.0 million. Paid claims are up slightly from $11.1 million in 1987 to $11.4 million in 1988. Loss adjustment expense increased from $3.3 million to $3.7 million. Operating expenses in 1988 are up $0.1 million to $1.8 million.

## Statutory Reserves

As of year-end 1988, the JUA reports loss and loss adjustment expense reserves of $255.9 million (Exhibit 5), up more than $27.0 million from 1987. Loss reserves account for most of the increase being up $23.3 million from 1987 to $231.5 million. Most of the loss reserve increase is in IBNR which increased almost $21 million to $117.3 million. Pending loss reserves are up less than $3 million. Loss adjustment expense reserves are up $4.0 million to $24.4 million. The average pending claim value is $47,000.

## Pending Claims

The 1,143 pending claims have the typical distribution expected for occurrence coverage. Over half are for accident-years 1984 and prior. (See Exhibit 6). Thirty-one claims are still pending from the first two years the JUA existed.

## Reserve Development

Existing records allow comparing the original reserves with current estimates only for accident-years 1980 through 1987.

In 1988, the ultimate expected incurred losses for accident-years 1980 through 1987 were reduced $22.5 million or almost 10% from year-end 1987. (See Exhibit 7E). The originally established reserves for accident-years 1984, 1985 and 1986 are now thought to have been overstated by 25%-35%. For accident-years 1980 through 1982, however, the originally established reserves are still thought to have been substantially understated.

One possible reason for the reserve reduction is that for the last three years actual claim payments have been substantially less than expected. (See Exhibit 8). At year-end 1985, the JUA expected to pay a total of $69.1 million during the three year period 1986, 1987, and 1988 for claims that occurred in 1985 and prior. During the three year period, however, only $33.7 million was paid, or 49% of expected.

## Claim Payout

Rhode Island has the second longest estimated time to pay one-half of the incurred claims, 5.6 years (Exhibit 9). The JUA expects it to take 20 years to pay all the claims from one accident year.

## Discounted Reserves

The $166.8 million deficit does not reflect the $10.4 million in the Stabilization Reserve Fund nor the interest to be earned on currently invested assets. Assuming (1) the current reserve estimates are adequate, (2) the estimated runoff pattern is reasonably accurate, (3) current invested assets will continue to earn their embedded yield, and (4) the full value of the assets will be realized if they are sold before maturity, the JUA needs at least $178.1 million to meet those payments or $66.1 million more than it has, including the funds in the Stabilization Reserve Fund. (See Exhibit 10). If future premiums are not used to meet those payments, the current invested assets could be depleted sometime in 1993 leaving $123.3 million to be paid. (See Exhibit 11). As long as cash flow remains positive, however, the JUA will be able to meet its obligations.

The JUA's financial condition could worsen if the critical assumptions are optimistic. For instance, if reserves should prove to be understated by 10%, the shortage increases to $83.9 million.

## Rate Filings

Historically, the JUA has had difficulty in obtaining rate increases. (See Exhibit 12E). For 1978, a 34.1% rate increase was requested, but no hearing was held, and the rate increase was not approved. The only year for which the requested rate increase was approved was 1979. For 1980, a 25.3% rate increase was requested but later withdrawn. For each of the subsequent years, rate increases were requested and the JUA usually received one-half or less of the amount requested. For 1986, a 91.4% increase was requested but only a 36.1% increase was approved but not until July 1, 1987. On the same date a 5.6% increase was approved for 1987 basic limits coverage although 78% was requested. For 1988, a 55.3% increase was requested but only 19.9% was granted.

## Conclusion

The Rhode Island JUA deficit is more than double current annual premiums even when consideration is given to future investment income. While premium income and investment income amount to approximately $39 million last year, liabilities are being added at a rate of more then $50 million a year. The Stabilization Reserve Fund will be able to supply only $10.1 million to offset the JUA's deficit. One positive note is that recent actual payments have been less than expected. If this trend continues, the deficit may not grow as fast as it has and could possibly be reduced. Whether insurers will be able to recoup any assessments remains to be seen.

# South Carolina Medical Malpractice JUA

## History

The South Carolina Medical Malpractice JUA became operational June 30, 1975. Members include all insurers writing bodily injury liability insurance including multi-peril policies but excluding automobile liability insurers. The JUA provides occurrence coverage for physicians, hospitals, and other health care providers. The JUA market share was 55.4% in 1988. (See Exhibit 1). The market share is up slightly from 53.7% in 1987.

## Funding and Deficit Provisions

Funding is provided from (1) policyholder premiums and fees, (2) policyholder assessments, and (3) member assessments. If a deficit occurs, JUA policyholders can be assessed up to one annual premium or the deficit may be funded through prospective rate increases. If these measures do not raise sufficient funds, member insurers are responsible for the remaining deficit.

## Balance Sheet

As of fiscal year ending June 30, 1988, the South Carolina JUA reports assets of $34.4 million and liabilities of $49.0 million for a deficit of $14.6 million. (See Exhibit 2). Assets are up 36% from $25.3 million while liabilities are up only 16% from $42.4 million resulting in the deficit decreasing 16% from $17.4 million.

## Assets

Invested assets amount to $32.5 million with $31.8 million in government bonds. (See Exhibit 3). At fiscal year-end 1988, the bonds had an embedded yield of 8.0% which is up slightly from 7.9% a year earlier. Average bond maturity is 2.4 years. The remaining invested assets, $0.7 million, were in short-term investments. The $1.9 million in non-invested assets is not specified as to source.

## Cash Flow

The JUA had a $4.6 million positive cash flow in fiscal year ending June 30, 1988. (See Exhibit 4). Total income was $14.8 million, up $2.3 million from 1987. Premiums accounted for $12.7 million, up almost 20% from 1987. Investment income was up from $1.9 million to $2.1 million. Expenditures included $5.5 million for paid claims ($3.6 million in 1987), $3.2 million for loss adjustment expenses, ($2.1 million in 1987), and $1.4 million for operating expenses ($1.0 million in 1987).

## Statutory Reserves

For the fiscal year ending June 30, 1988, the JUA reports loss and loss adjustment expense reserves of $41.6 million up from $36.1 million in 1987. (See Exhibit 5). Of this amount, $29.9 is for loss reserves and $11.7 for loss adjustment expenses. Loss reserves are up 12% while loss adjustment expenses are up 26%. The loss reserves are comprised of $9.1 million for pending claims and $20.9 million for IBNR. The average pending claim value is $13,000, the lowest of all JUAs.

## Pending Claims

The 694 pending claims are up 16% from 1987. (See Exhibit 6). The pending claim distribution is typical of occurrence coverage with half the claims from 1984 and prior.

## Reserve Development

The JUA provided reserve developments as of fiscal year ending June 30, 1989 which provides a look at the most recent estimate of the accident-year 1988 reserve as well as all other accident-years. (See Exhibit 7F). Up until 1984, the initial fiscal accident-year reserves have been found to have been inadequate. For fiscal-years ending since 1984, the original reserves as of June 1989 appear to have been more than adequate. For each fiscal accident-year ending in 1985 to 1988, the reserves have been reduced approximately 20%.

The reserve reduction may be a reflection of the fact that actual claim payments have been somewhat less than expected. (See Exhibit 8). At fiscal year-end June 1986, the JUA expected to pay out $13.3 million in the subsequent

two years. During those two years, $12.2 million was actually paid or 8% less than expected.

### Claim Payout

The South Carolina JUA has the second shortest anticipated runoff period for occurrence policies. The JUA expects half of the incurred claims to be paid within 3.4 years. (See Exhibit 9).

### Discounted Reserves

The $14.6 million deficit does not include the investment income to be earned on the currently invested assets. Assuming (1) the current reserve estimates are adequate, (2) the estimated runoff pattern is reasonably accurate, (3) current invested assets will continue to earn their embedded yield, and (4) the full value of the assets will be realized if they are sold before maturity, the amount of money needed to meet future payments is $31.7 million. (See Exhibit 10). Considering investment income, therefore, invested assets are $0.9 million more than the amount needed to cover all future payments.

The JUA financial condition could worsen if the critical assumptions are optimistic. For instance, if reserves should prove to be underestimated by 10%, the surplus becomes a $2.3 million deficit

### Rate Filings

The South Carolina JUA has always received requested rate increases. (See Exhibit 12F). Rate increases for physicians amounted to 50% for 1977, 40% for 1981, and 25% for 1983, 1985, and 1986. Hospital increases amounted to 133% for 1978, 20% for 1983, 40% for 1985, and 45% for 1986. For 1987 and 1988, no ratio filings were made after reviewing the experience.

### Conclusion

The JUA's current assets are just sufficient to cover current liabilities. Over the last two years the JUA has moved from a deficit to a small surplus considering investment income. With the provision to assess policyholders for any deficit, the probability of insurers being assessed has been reduced considerably.

# Texas Medical Malpractice JUA

## History

The Texas Medical Malpractice JUA began operations September 8, 1975. Membership includes all liability insurers except farm and county mutuals. The JUA is authorized to offer occurrence coverage to any health care provider or physician included in one of the categories eligible for coverage as determined by the State Board. In 1988, the JUA covered physicians, surgeons, dentists, and hospitals and wrote 8.8% of all medical malpractice insurance in the state. (See Exhibit 1). The market share is down from the 9.9% in 1987.

## Funding and Deficit Provisions

Funding for the JUA comes from (1) policyholder premiums, (2) Stabilization Reserve Fund, (3) policyholder assessments, and (4) member assessments. Funding for the Stabilization Reserve Fund comes from a surcharge on JUA policyholder premiums. If a deficit occurs in the JUA, an assessment against JUA policyholders insured anytime in the last two years can be made and is limited to 100% of the current annual premium. If the policyholder assessment does not raise sufficient funds to cover the JUA deficit, assessments can also be levied against insurers based on their premium writings with a maximum assessment of 1% of surplus. This is the only JUA to have assessed insurers, policyholders and insurer assessments were made for calendar years 1984, 1985, and 1986. No assessments were necessary for calendar years 1987 and 1988.

## Balance Sheet

As of year-end 1988, the Texas JUA balance sheet showed assets of $133.1 million, up from $126.0 million in 1987, and liabilities of $133.1 million for a zero surplus. (See Exhibit 2). The JUA changed its accounting procedures in 1987 to record as a receivable any deficit incurred during the year. As noted above, the JUA assesses and collects funds whenever it has a deficit.

## Assets

The JUA invested $127.5 million of its assets. (See Exhibit 3). Government bonds of $124.0 million comprised the largest component of the assets. The embedded yield on the bonds is 8.1%, down from 8.2% in 1987 with an average term of 2.6 years. Short-term investments total $2.7 million, and an additional $0.8 million is held in cash. Of the remaining $5.6 million in assets, $1.1 million is in premium balances, with the balance in money due from assessments and accrued interest.

## Cash Flow

In 1988, cash flow is a positive $4.4 million. (See Exhibit 4). Premium is $12.5 million, down $5.5 million from 1987. Investment income is $9.3 million, up $1.9 million from 1987. Total income is $26.1 million, up $0.7 million from 1987. Other income, mostly from the Stabilization Reserve Fund, amounted to $4.2 million. Total expenditures are $21.7 million, down $3.8 million from $25.5 million in 1987. Expenditures for claim payments are $13.9 million, down $1.8 million from the $15.7 million in 1987. Loss adjustment expenses are up one-third to $3.8 million. Expenses are $4.2 million in 1988, up from $3.4 million in 1987.

## Statutory Reserves

As of year-end 1988, the JUA reports $108.7 million in loss and loss adjustment expense reserves. (See Exhibit 5). This amount is $6.3 million higher than in 1987. The loss reserve is $84.1 million, up $5.1 million, while the loss adjustment expense reserve is $24.6 million, up $1.2 million. The loss reserve is comprised of $29.1 million for pending claims and $55.0 million for IBNR. The average reserve is $40,000, up 14% from 1987.

## Pending Claims

After surging in 1987, pending claims are down slightly in 1988. (See Exhibit 6). Unlike other JUAs offering occurrence policies, less than 50% of the pending claims are for accident years 1984 and prior.

## Reserve Development

For most years, the initial accident-year reserves proved to be inadequate. (See Exhibit 7G). For the early years, 1976 and 1977, the JUA now estimates that the initial reserves were slightly more than adequate. For accident-years 1979 through 1984, the initial accident-year reserves have been inadequate. The inadequacies range from $3.2 million in 1985 to $7.3 million in 1980. In 1980, the initial accident-year reserve was $3.7 million, while $11.0 million is the current estimate of that reserve. The JUA has not changed its estimates for accident-years 1986 and 1987. During 1988, however, the JUA increased its reserves for accident years 1984 and 1985 by $1.0 million and $3.2 million respectively.

One possible reason for increasing reserve estimates for prior accident years may be that actual claim payments have been larger than expected. (See Exhibit 8). At year-end 1985, the JUA expected to pay $30.0 million during 1986, 1987 and 1988 for claims that occurred in 1985 and prior. During these three years, however, the actual payments amounted to $34.3 million or 14% more than expected.

## Claim Payout

In Texas, the length of time to pay one-half of the ultimate incurred losses is 4.5 years (Exhibit 9) This relatively short time may explain why the JUA has relatively fewer older claims.

## Discounted Reserves

Based on the statutory results, liabilities are set equal to assets. If the reserve is discounted assuming (1) the current accident-year reserve estimates are adequate, (2) the estimated runoff pattern is reasonable accurate, (3) current invested assets will continue to earn at their current rate, and (4) full value of the invested assets will be obtained if they have to be sold before maturity, the present value of those future payments is $42.1 million less than current invested assets. (See Exhibit 10).

The current invested assets along with future investment income from those assets appear to be sufficient to pay all current liabilities. Unlike the other JUAs, the excess, $42.3 million, provides a cushion if any of the four assumptions above prove to be incorrect. For instance, if reserves prove to be 20% deficient, the excess is reduced but it is still a positive $12.3 million.

## Rate Filings

Except for 1981, 1986, and 1988, the JUA has always received the approval for the rate increase requested. (See Exhibit 12G). Since its inception the JUA has filed for several rate increases. The first was a 50% increase in hospital rates for 1981. This rate increase was disapproved. For 1983, the JUA filed a 263% rate increase for dentists and oral surgeons, and this rate increase was approved. For 1985, the JUA filed two rate increases (1) 50% for physicians, surgeons, hospitals, other institutions, and (2) 50% for podiatrists. Both were approved. For 1986, it filed a 156.3% increase for physicians and other non-institutional healthcare providers and a 161.9% increase for hospitals and other institutional healthcare providers. For physicians, a 104.7% increase was approved, and a 109.9% increase was approved for hospitals. For 1987, rate increase of 29.8% for physicians and 12.9% for hospitals were requested and approved. For 1988, rate increases of 11.6% for physicians and 58.7% for hospitals was requested. For physicians a rate decrease of 4.2% was approved while a rate increase of 19.2% for hospitals was approved.

## Conclusions

The Texas JUA appears to be financially sound when future investment income is considered. If claim reserves prove as much as 20% inadequate, the JUA would probably have sufficient funds to meet its obligations. The fact that the JUA assesses policyholders and insurers when a statutory deficit occurs should prevent huge deficits from accumulating as they have in other JUAs.

# Virginia Medical Malpractice JUA

## History

The Virginia JUA became operational September 9, 1986. Each licensed insurer writing liability insurance within the state is a member of the association except those insurers exempted by regulation. The JUA offers claims-made coverage to physicians and surgeons. In 1988, the Commission expanded the JUA to include nurse practitioners, nurse anesthetists, and nurse midwives. However, as of June 1988 the JUA has not written coverage for any class of providers other than physicians and surgeons. In 1988, the JUA wrote 3.3% of the medical malpractice market based on premium volume. (See Exhibit 1). The market share is up from 2.8% in 1987.

## Funding and Deficit Provisions

Funding is provided from (1) policyholder premiums, (2) Stabilization Reserve Fund surcharges, and (3) member assessments. If a deficit occurs, the deficit is first recovered from the Stabilization Reserve Fund. If the Stabilization Reserve Fund is exhausted, the association can assess members as approved by the state corporation commission. The liability of the policyholder is limited to the funds accruing in the Stabilization Reserve Fund.

## Balance Sheet

As of year-end 1988, the Virginia JUA reports assets of $7.7 million including $2.6 million in the Stabilization Reserve Fund and liabilities of $5.6 million, with a surplus of $2.7 million. (See Exhibit 2).

## Assets

The JUA invests $7.3 million of the $7.7 million of assets. (See Exhibit 3). The investments include $4.4 million in bonds with an average maturity of 2.7 years. The balance of investments, $2.9 million, is held in cash. The $0.4 million in non-invested assets is divided between premium balances and other assets. The embedded yield of the bonds is 8.3%.

## Cash Flow

In 1988, the cash flow was a positive $2.8 million. (See Exhibit 4). Income of $3.9 million was offset by $1.1 million in expenditures. Almost all of the income was from $3.7 million in premium. Loss adjustment expenses were $163,000. Paid claims amounted to $11,500. The largest expenditure was for operating expenses, $943,000. Even with claims-made policies, the low paid claims in the first two years of operation is to be expected.

## Statutory Reserves

The JUA reports $2.8 million in loss and loss adjustment expense reserves. (See Exhibit 5). Approximately 80%, or $2.2 million, of the reserves are for claim payments and the remaining 20%, or $0.5 million, are for loss adjustment expenses. The average pending reserve amount of $102,000 for 16 claims is the highest average pending claim amount among all the JUAs.

## Pending Claims

As of year-end 1988, 16 claims are pending. (See Exhibit 6). Four claims are from 1987 and 12 are from 1988.

## Reserve Development

Given that the JUA has only been in operation for a little over two years there has not been enough time for reserve developments.

## Claim Payout

The Virginia JUA uses a claim payout pattern recommended by its consulting actuaries because it does not have its own experience. The JUA expects to pay one-half of its incurred liability on any accident-year within two years of the close of the accident-year. (See Exhibit 9).

## Discounted Reserves

Given the expected rapid runoff on claims, the JUA will not have much time to generate

investment income. Discounting the reserves based on the rapid runoff and the current embedded yield results in discounted reserve of $2.2 million. This is $5.1 million less than the current reserves.

### Rate Filings

Initial Virginia JUA rate level was established at 5% higher than the medical malpractice rates charged by the largest commercial carrier.

## Conclusions

No conclusions can be drawn regarding the financial condition of the Virginia JUA since it has only been in operation for a little over two years. At the present time, the JUA appears to be operating as a residual market given its low market share. The JUA also appears to have sufficient funds to meet its obligations.

# Wisconsin Medical Malpractice JUA

## History

The Wisconsin Medical Malpractice JUA began operations March 17, 1975. Members included all personal liability insurers. Insurance is offered to all health care providers. In 1988, the JUA medical malpractice market share of 38.7% (Exhibit 1) was down from 46.8% in 1987.

## Funding and Deficit Provisions

Funding comes from two sources, (1) policyholder premiums and (2) member assessments. If the JUA suffers a deficit, members can be assessed based on a pro rate share of their writings. A recoupment provision is provided in the form of a rate increase.

## Balance Sheet

As of year-end 1988, the Wisconsin JUA reports $94.1 million in assets ($85.1 million in 1987), $111.5 million in liabilities ($105.2 million in 1987), and a deficit of $17.4 million ($20.1 million in 1987). (See Exhibit 2).

## Assets

Invested assets amount to $86.5 million of which $85.5 million is in bonds. Short-term investments at year-end 1988 are $0.8 million. The bond portfolio has an embedded yield of approximately 7.8%. The average time to maturity for bonds is 4.9 years. The $7.5 million of non-invested assets include $2.7 million of premium balances and $4.8 million in interest income due and accrued.

## Cash Flow

In 1988, the Wisconsin JUA had a positive $8.9 million cash flow (Exhibit 4) down from $12.1 million in 1987. Total income of $25.8 million, up from $24.8 million in 1987 is comprised of $18.0 million from premiums and $7.8 million from investment income and other income. The premium figure is up from the $17.4 million in 1987, while investment income is up from $6.9 million in 1987. Expenditures of $16.9 million are up $4.2 million from the $12.7 million in expenditures in 1987. Paid claims increased from $7.6 million in 1987 to $10.0 million in 1988. The 1988 loss adjustment expenses are $5.6 million compared to $3.9 million in 1987. Other expenses are up $0.1 million to $1.3 million.

## Statutory Reserves

The Wisconsin JUA reports $100.2 million in loss and loss adjustment expense reserves as of year-end 1988 (Exhibit 5) up $5.2 million from 1987. The increase is due to loss reserves increasing from $67.1 million in 1987 to $69.0 million in 1988, while the loss adjustment expense reserve in 1988 of $31.2 million is up $3.2 million from the $28.0 million loss adjustment expense reserve in 1987. All of the increase in the loss reserves is due to the IBNR reserve increasing from $45.8 million in 1987 to $52.2 million in 1988. The pending reserve decreased from $21.3 million in 1987 to $16.8 million in 1988. The average pending reserve of $17,900 is up slightly from the average pending reserve of $17,500 in 1987.

## Pending Claims

The number of pending claims is down from 1,216 in 1987 to 939 in 1988. (See Exhibit 6). The drop in pending claims may be one of the reasons that over the last three years actual claim payments have been less than expected. (See Exhibit 8). At year-end 1985, the JUA expected to pay $42.2 million during 1986, 1987, and 1988 for injuries that occurred in 1985 and prior. During the three year period, $39.4 million was paid or 7% less than expected.

## Discounted Reserves

While the Wisconsin JUA did not supply the requested data on historical payout patterns and current accident-year reserves for development and discounting purposes, the JUA's consulting actuary did provide a projected run-off pattern for the loss and loss adjustment expense reserves as of 9/30/88. Applying this projected run-off pattern to the year-end 1988 reserve and discounting at the embedded yield,

the discounted reserve is estimated to be $74.5 million, which is $12.0 million less than the invested assets of $86.5 million. (See Exhibit 10). This margin provides some cushion if reserves prove to be inadequate or claims are paid faster than anticipated. If reserves are 20% inadequate, the $8.3 million surplus becomes a $2.9 million deficit.

## Rate Filings

Since 1984, the JUA requested rate increases five times and received approval for the requested rate increases four times. For 1984, the JUA asked for a 51.5% increase in the rates for physicians and received approval for a 35% increase. At the same time, they requested a 67.2% increase for hospitals and received a 49.0% increase. For 1985, the JUA requested and received approval for a 69.6% increase for physicians and a 52.4% increase for hospitals. For 1986, the JUA requested and received approval for a 32.2% increase in physician rates and a 51.4% increase in hospital rates. For 1987, the JUA requested and received approval for a 9.8% increase in physician rates and a 23.1% increase in hospital rates. For 1988, the JUA requested and received approval for a 2.5% increase in physician rates and a 23.8% increase in hospital rates.

## Conclusions

Based on this analysis, the Wisconsin JUA appears to have sufficient invested assets including future investment income to cover existing claim liabilities. If any of the assumptions underlying this estimate prove to be optimistic, however, the JUA might not have sufficient funds to cover existing claim liabilities.

# 1988
# EXHIBITS

## Exhibit 1
## 1988 Market Share

| State | Percent |
|---|---|
| Florida | 11.5% |
| Kansas | 8.8 |
| Massachusetts | 87.6 |
| Minnesota | 0.4 |
| New Hampshire | 63.1 |
| New York | 20.0 |
| Pennsylvania | 3.3 |
| Rhode Island | 85.1 |
| South Carolina | 55.4 |
| Texas | 8.8 |
| Virginia | 3.3 |
| Wisconsin | 38.7 |

## Exhibit 2
## Balance Sheet—Statutory

| Year-End 1988 | Florida | Kansas* | Massachusetts | Minnesota | New Hampshire | New York |
|---|---|---|---|---|---|---|
| Assets | $69,384,415 | $ 9,017,915 | $ 574,178,874 | $ 829,486 | $ 55,395,786 | $ 728,516,851 |
| Liabilities | 69,384,415 | 9,017,915 | 1,097,970,341 | 1,004,625 | 85,662,764 | 1,731,174,856 |
| Surplus | 0 | 0 | (523,791,467) | (175,139) | (30,266,978) | (1,002,658,005) |

| Year-End 1988 | Pennsylvania | Rhode Island | South Carolina* | Texas | Virginia | Wisconsin |
|---|---|---|---|---|---|---|
| Assets | $63,165,260 | $110,391,462 | $ 34,407,112 | $133,065,149 | $ 7,683,723 | $ 94,072,098 |
| Liabilities | 60,219,394 | 277,155,329 | 49,045,684 | 133,065,149 | 4,972,963 | 111,511,396 |
| Surplus | 2,945,866 | (166,763,867) | (14,638,572) | 0 | 2,710,760 | (17,439,298) |

* Fiscal year ending June 1988.

## Exhibit 3
## Assets

| Year-End 1988 | Florida | Kansas* | Massachusetts | Minnesota | New Hampshire | New York |
|---|---|---|---|---|---|---|
| **Assets** | $69,384,415 | $ 9,017,915 | $574,178,874 | $ 829,486 | $55,395,786 | $728,516,851 |
| **Invested** | 67,229,662 | 8,833,464 | 510,870,154 | 826,153 | 51,630,843 | 566,199,755 |
| **Bonds** | 46,174,250 | 0 | 476,130,379 | 0 | 45,610,757 | 517,194,994 |
| **Short Term** | 18,413,427 | 8,137,305 | 33,487,000 | 0 | 2,284,876 | 48,471,281 |
| **Cash** | 2,641,985 | 696,159 | 1,252,776 | 590,272 | 3,735,210 | 533,480 |
| **Other** | 0 | 0 | (1) | 235,881 | 0 | 0 |
| **Non-Invested** | 2,154,753 | 184,451 | 63,308,720 | 3,333 | 3,764,943 | 162,317,096 |
| **Premium Balance** | 1,372,743 | 0 | 50,227,369 | 3,333 | 1,416,585 | 152,317,782 |
| **Other** | 782,010 | 184,451 | 13,081,351 | 0 | 2,348,358 | 9,999,314 |
| **Embedded Yield** | 7.9% | 5.3% | 7.6% | 7.8% | 8.8% | 9.2% |
| **Bond Maturity in Years** | 1.6 | No Bonds | 9.3 | No Bonds | 4.6 | 16.7 |

| Year-End 1988 | Pennsylvania | Rhode Island | South Carolina* | Texas | Virginia | Wisconsin |
|---|---|---|---|---|---|---|
| **Assets** | $63,165,260 | $110,391,462 | $ 34,407,112 | $133,065,149 | $ 7,683,723 | $ 94,072,098 |
| **Invested** | 62,179,588 | 101,898,113 | 32,537,630 | 127,469,011 | 7,320,706 | 86,533,226 |
| **Bonds** | 56,625,380 | 89,395,619 | 31,829,318 | 124,039,783 | 4,390,136 | 85,505,506 |
| **Short Term** | 4,782,049 | 0 | 691,422 | 2,669,083 | 0 | 765,140 |
| **Cash** | 772,159 | 2,611,936 | 16,890 | 760,145 | 2,930,570 | (205,420) |
| **Other** | 0 | 9,890,558 | 0 | 0 | 0 | 468,000 |
| **Non-Invested** | 985,672 | 8,493,349 | 1,869,482 | 5,596,138 | 363,017 | 7,538,872 |
| **Premium Balance** | 62,571 | 5,759,016 | 23,545 | 1,132,640 | 220,499 | 2,707,838 |
| **Other** | 923,101 | 2,734,333 | 1,845,937 | 4,463,498 | 142,518 | 4,831,034 |
| **Embedded Yield** | 7.4% | 8.0% | 8.0% | 8.1% | 8.3% | 7.8% |
| **Bond Maturity in Years** | 6.3 | 4.9 | 2.4 | 2.6 | 2.7 | 4.9 |

* Fiscal year ending June 1988.

## Exhibit 4
## Cash Flow

| Year-End 1988 | Florida | Kansas* | Massachusetts | Minnesota | New Hampshire | New York |
|---|---|---|---|---|---|---|
| Income | $23,334,629 | $ 3,975,077 | $231,001,692 | $ 534,927 | $22,136,474 | $148,636,926 |
| Premium | 19,190,946 | 3,508,044 | 188,508,194 | 510,548 | 18,609,476 | 100,801,994 |
| Investment Income | 4,143,683 | 467,033 | 39,062,378 | 24,379 | 3,526,998 | 43,860,543 |
| Other Income | 0 | 0 | 3,431,120 | 0 | 0 | 3,974,389 |
| Expenditures | 13,717,228 | 3,460,866 | 94,387,338 | 83,124 | 11,584,234 | 31,508,299 |
| Paid Claims | 7,206,502 | 1,623,927 | 61,091,163 | 0 | 7,589,965 | 20,108,310 |
| Loss Adj. Exp. | 4,704,119 | 566,482 | 17,174,119 | 6,617 | 2,628,349 | 9,660,486 |
| Other Expenses | 1,806,607 | 1,270,457 | 16,122,056 | 76,507 | 1,365,920 | 1,739,503 |
| Net Cash Flow | 9,617,401 | 514,211 | 136,614,354 | 451,803 | 10,552,240 | 117,128,627 |

| Year-End 1988 | Pennsylvania | Rhode Island | South Carolina* | Texas | Virginia | Wisconsin |
|---|---|---|---|---|---|---|
| Income | $13,346,363 | $38,841,321 | $ 14,820,109 | $26,063,677 | $ 3,956,400 | $25,856,987 |
| Premium | 8,441,730 | 30,786,677 | 12,709,677 | 12,525,609 | 3,693,989 | 18,036,563 |
| Investment Income | 4,904,633 | 8,105,570 | 2,110,411 | 9,296,242 | 262,398 | 7,641,552 |
| Other Income | 0 | (50,926) | 21 | 4,241,826 | 13 | 178,872 |
| Expenditures | 8,724,552 | 16,817,538 | 10,177,465 | 21,668,734 | 1,117,921 | 16,928,884 |
| Paid Claims | 4,173,884 | 11,368,125 | 5,487,756 | 13,904,681 | 11,500 | 9,980,030 |
| Loss Adj. Exp. | 4,081,195 | 3,671,124 | 3,197,114 | 3,575,386 | 163,180 | 5,639,766 |
| Other Expenses | 469,473 | 1,778,289 | 1,492,595 | 4,188,667 | 943,241 | 1,309,088 |
| Net Cash Flow | 4,621,811 | 22,023,783 | 4,642,644 | 4,394,943 | 2,838,479 | 8,928,103 |

* Fiscal year ending June 1988.

## Exhibit 5
## Loss and LAE Reserves

| Year-End 1988 | Florida | Kansas* | Massachusetts | Minnesota** | New Hampshire | New York |
|---|---|---|---|---|---|---|
| Loss and LAE Reserves | $96,136,514 | $ 5,347,350 | $1,004,859,457 | $ 569,916 | $71,735,501 | $1,631,560,917 |
| Loss Reserves | 68,944,598 | 3,961,000 | 728,073,796 | 569,916 | 55,271,271 | 1,242,927,470 |
| LAE Reserves | 27,191,916 | 1,386,350 | 276,785,661 | 0 | 16,464,230 | 388,633,447 |
| Loss Reserves | 68,944,598 | 3,961,000 | 728,073,796 | 569,916 | 55,271,271 | 1,242,927,470 |
| Pending | 28,224,687 | 3,711,000 | 383,024,176 | 261,383 | 8,281,361 | 165,996,357 |
| IBNR | $40,719,911 | $ 250,000 | $ 345,049,620 | $ 308,533 | $46,989,910 | $1,076,931,113 |
| Pending Claims | Not Reported | 96 | 4,016 | 4 | 382 | 1,944 |
| Average Pending Claim | | $ 38,656 | $ 95,375 | $ 65,346 | $ 21,679 | 85,389 |

| Year-End 1988 | Pennsylvania | Rhode Island | South Carolina* | Texas | Virginia | Wisconsin |
|---|---|---|---|---|---|---|
| Loss and LAE Reserves | $57,853,029 | $255,894,996 | $ 41,617,654 | $108,698,836 | $ 2,755,818 | $ 100,271,231 |
| Loss Reserves | 43,525,092 | 231,518,110 | 29,945,802 | 84,086,849 | 2,241,582 | 69,040,417 |
| LAE Reserves | 14,327,937 | 24,376,886 | 11,671,852 | 24,611,987 | 514,236 | 31,230,814 |
| Loss Reserves | 43,525,092 | 231,518,110 | 29,945,802 | 84,086,849 | 2,241,582 | 69,040,417 |
| Pending | 19,383,551 | 54,213,469 | 9,059,550 | 29,068,318 | 1,642,500 | 16,836,816 |
| IBNR | $24,141,541 | $177,304,641 | $ 20,886,252 | $ 55,018,531 | $ 599,082 | $ 52,203,601 |
| Pending Claims | 629 | 1,143 | 694 | 719 | 16 | 939 |
| Average Pending Claim | $ 30,816 | $ 47,431 | $ 13,054 | $ 40,429 | $ 102,656 | $ 17,931 |

* Fiscal year ending June 1988.
** LAE Reserves included in Loss Reserves, and Pending and IBNR Loss Reserves also include LAE Reserves

## Exhibit 6
## Pending Claims

| Calendar Year | Florida | Kansas* | Massachusetts | Minnesota | New Hampshire | New York |
|---|---|---|---|---|---|---|
| Prior to 1978 | | | 62 | | 3 | 241 |
| 1978 | | | 50 | | 3 | 101 |
| 1979 | | | 74 | | 8 | 117 |
| 1980 | | | 116 | | 14 | 125 |
| 1981 | | | 176 | | 24 | 174 |
| 1982 | | | 304 | | 24 | 195 |
| 1983 | | | 404 | | 35 | 193 |
| 1984 | | 1 | 522 | | 28 | 134 |
| 1985 | | 0 | 648 | | 52 | 261 |
| 1986 | | 9 | 581 | 2 | 62 | 240 |
| 1987 | | 27 | 576 | 1 | 65 | 131 |
| 1988 | | 59 | 503 | 1 | 64 | 32 |
| Total | Not Reported | 96 | 4,016 | 4 | 382 | 1,944 |

| Calendar Year | Pennsylvania | Rhode Island | South Carolina* | Texas | Virginia | Wisconsin |
|---|---|---|---|---|---|---|
| Prior to 1978 | 2 | 31 | 5 | 5 | | 14 |
| 1978 | 12 | 23 | 5 | 10 | | 20 |
| 1979 | 8 | 19 | 15 | 12 | | 8 |
| 1980 | 20 | 26 | 14 | 16 | | 14 |
| 1981 | 45 | 61 | 9 | 17 | | 39 |
| 1982 | 100 | 137 | 45 | 18 | | 75 |
| 1983 | 126 | 181 | 67 | 26 | | 89 |
| 1984 | 127 | 158 | 87 | 61 | | 163 |
| 1985 | 138 | 165 | 128 | 150 | | 122 |
| 1986 | 33 | 130 | 124 | 218 | | 83 |
| 1987 | 12 | 109 | 115 | 149 | 4 | 123 |
| 1988 | 6 | 103 | 80 | 37 | 12 | 189 |
| Total | 629 | 1,143 | 694 | 719 | 16 | 939 |

* Fiscal year ending June 1988

## Exhibit 7A
## Florida Reserve Development

Inception to 12/88

| Accident-Year Ending | Original Reserve | Developed Reserve At 12/88 | Reserve Redundency/ (Deficiency) |
|---|---|---|---|
| 1976 | $ 6,164,771 | $ 7,410,000 | $ (1,245,229) |
| 1977 | 9,096,805 | 6,601,000 | 2,495,805 |
| 1978 | 6,562,029 | 6,360,000 | 202,029 |
| 1979 | 7,392,625 | 8,466,000 | (1,073,375) |
| 1980 | 5,808,681 | 11,612,000 | (5,803,319) |
| 1981 | 4,190,641 | 12,412,000 | (8,221,359) |
| 1982 | 4,363,976 | 18,586,000 | (14,222,024) |
| 1983 | 11,616,665 | 13,778,418 | (2,161,753) |
| 1984 | 9,723,880 | 8,635,000 | 1,088,880 |
| 1985 | 4,652,588 | 8,526,000 | (3,873,412) |
| 1986 | 10,251,607 | 13,385,000 | (3,133,393) |
| 1987 | 43,212,032 | 35,601,000 | 7,611,032 |
| Total | $123,036,300 | $151,372,418 | $(28,336,118) |

1988 Development

| Accident-Year Ending | Developed Reserve At 12/87 | Developed Reserve At 12/88 | Reserve Redundency/ (Deficiency) |
|---|---|---|---|
| 1976 | $ 7,295,771 | $ 7,410,000 | $ (114,229) |
| 1977 | 6,442,805 | 6,601,000 | (158,195) |
| 1978 | 6,184,771 | 6,360,000 | (175,229) |
| 1979 | 8,289,452 | 8,466,000 | (176,548) |
| 1980 | 11,033,881 | 11,612,000 | (578,119) |
| 1981 | 11,871,641 | 12,412,000 | (540,359) |
| 1982 | 18,149,984 | 18,586,000 | (436,016) |
| 1983 | 12,178,665 | 13,778,418 | (1,599,753) |
| 1984 | 8,566,710 | 8,635,000 | (68,290) |
| 1985 | 7,703,729 | 8,526,000 | (822,271) |
| 1986 | 13,123,607 | 13,385,000 | (261,393) |
| 1987 | 43,212,032 | 35,601,000 | 7,611,032 |
| Total | $154,053,048 | $151,372,418 | $ 2,680,630 |

## Exhibit 7B
## Kansas Reserve Development

Inception to 6/88

| Fiscal Accident-Year Ending | Original Reserve | Developed Reserve At 6/88 | Reserve Redundency/ (Deficiency) |
|---|---|---|---|
| 1977 | $ 231,980 | $ 16,044 | $ 215,936 |
| 1978 | 583,730 | 321,704 | 262,026 |
| 1979 | 861,487 | 459,923 | 401,564 |
| 1980 | 815,528 | 1,040,462 | (224,934) |
| 1981 | 706,474 | 911,826 | (205,352) |
| 1982 | 1,711,846 | 1,754,434 | (42,588) |
| 1983 | 2,258,250 | 1,914,371 | 343,879 |
| 1984 | 3,206,250 | 2,557,129 | 649,121 |
| 1985 | 3,727,950 | 2,318,880 | 1,409,070 |
| 1986 | 2,282,700 | 1,873,134 | 409,566 |
| 1987 | 3,854,250 | 2,837,801 | 1,016,449 |
| Total | $20,240,445 | $16,005,708 | $4,234,737 |

1988 Development

| Fiscal Accident-Year Ending | Developed Reserve At 6/87 | Developed Reserve At 6/88 | Reserve Redundency/ (Deficiency) |
|---|---|---|---|
| 1977 | $ 16,044 | $ 16,044 | $ 0 |
| 1978 | 321,704 | 321,704 | 0 |
| 1979 | 459,923 | 459,923 | 0 |
| 1980 | 1,040,462 | 1,040,462 | 0 |
| 1981 | 911,826 | 911,826 | 0 |
| 1982 | 1,846,307 | 1,754,434 | 91,873 |
| 1983 | 1,882,045 | 1,914,371 | (32,326) |
| 1984 | 2,366,016 | 2,557,129 | (191,113) |
| 1985 | 2,397,360 | 2,318,880 | 78,480 |
| 1986 | 2,783,816 | 1,873,134 | 910,682 |
| 1987 | 3,854,250 | 2,837,801 | 1,016,449 |
| Total | $17,879,753 | $16,005,708 | $1,874,045 |

## Exhibit 7C
## Massachusetts Reserve Development

| Accident-Year | Original Reserve | Developed Reserve At 6/88 | Reserve Redundency/ (Deficiency) |
|---|---|---|---|
| | Inception to 12/88 | | |
| 1976 | $ 22,714,254 | $ 26,714,782 | $ (4,000,528) |
| 1977 | 32,182,009 | 32,863,278 | (681,269) |
| 1978 | 34,272,781 | 45,175,814 | (10,903,033) |
| 1979 | 37,671,959 | 58,777,580 | (21,105,621) |
| 1980 | 35,304,820 | 76,305,310 | (41,000,490) |
| 1981 | 48,682,760 | 91,619,660 | (42,936,900) |
| 1982 | 48,335,515 | 107,711,979 | (59,376,464) |
| 1983 | 182,544,791 | 124,105,406 | 58,439,385 |
| 1984 | 221,491,220 | 139,093,619 | 82,397,601 |
| 1985 | 223,626,369 | 158,581,501 | 65,044,868 |
| 1986 | 213,581,392 | 172,795,021 | 40,786,371 |
| 1987 | 273,112,368 | 177,443,117 | 95,669,251 |
| Total | $1,563,494,448 | $1,401,161,277 | $162,333,171 |



## Exhibit 7D
## New York Reserve Development

| Accident-Year | Original Reserve | Developed Reserve At 12/88 | Reserve Redundency/ (Deficiency) |
|---|---|---|---|
| | Inception to 12/88 | | |
| 1975 | $ 8,084,387 | $ 25,559,735 | $(17,475,348) |
| 1976 | 44,007,000 | 64,869,695 | (20,862,695) |
| 1977 | 13,614,000 | 49,458,709 | (35,844,709) |
| 1978 | 23,668,000 | 42,731,104 | (19,063,104) |
| 1979 | 40,633,000 | 49,344,398 | (8,711,398) |
| 1980 | 42,346,997 | 45,007,896 | (2,660,899) |
| 1981 | 49,079,674 | 48,897,121 | 182,553 |
| 1982 | 65,175,744 | 39,747,665 | 25,428,079 |
| 1983 | 56,309,053 | 46,357,117 | 9,951,936 |
| 1984 | 30,476,829 | 27,467,936 | 3,008,893 |
| 1985 | 127,759,152 | 118,296,350 | 9,462,802 |
| 1986 | 410,452,381 | 333,956,308 | 76,496,073 |
| 1987 | 442,642,079 | 438,752,070 | 3,890,009 |
| Total | $1,354,248,296 | $1,330,446,104 | $ 23,802,192 |

| Accident-Year | Developed Reserve At 12/88 | Developed Reserve At 12/88 | Reserve Redundency/ (Deficiency) |
|---|---|---|---|
| | 1988 Development | | |
| 1975 | $ 27,272,121 | $ 25,559,735 | $ 1,712,386 |
| 1976 | 64,132,882 | 64,869,695 | (736,813) |
| 1977 | 52,341,036 | 49,458,709 | 2,882,327 |
| 1978 | 48,201,405 | 42,731,104 | 5,470,301 |
| 1979 | 60,137,757 | 49,344,398 | 10,793,359 |
| 1980 | 60,442,547 | 45,007,896 | 15,434,651 |
| 1981 | 70,756,240 | 48,897,121 | 21,859,119 |
| 1982 | 56,254,400 | 39,747,665 | 16,506,735 |
| 1983 | 62,051,536 | 46,357,117 | 15,694,419 |
| 1984 | 36,563,531 | 27,467,936 | 9,095,595 |
| 1985 | 126,378,385 | 118,296,350 | 8,082,035 |
| 1986 | 346,009,453 | 333,956,308 | 12,053,145 |
| 1987 | 442,642,079 | 438,752,070 | 3,890,009 |
| Total | $1,453,183,372 | $1,330,446,104 | $118,847,259 |

## Exhibit 7E
## Rhode Island Reserve Development

**Inception to 12/88**

| Accident-Year | Original Reserve | Developed Reserve At 12/88 | Reserve Redundency/ (Deficiency) |
|---|---|---|---|
| 1976 | | Not Available | |
| 1977 | | Not Available | |
| 1978 | | Not Available | |
| 1979 | | Not Available | |
| 1980 | $ 10,128,614 | $ 18,857,045 | $ (8,728,431) |
| 1981 | 11,979,104 | 17,325,608 | (5,346,504) |
| 1982 | 18,373,088 | 27,405,305 | (9,032,217) |
| 1983 | 23,186,372 | 23,973,118 | (786,746) |
| 1984 | 35,545,996 | 23,138,499 | 12,407,497 |
| 1985 | 49,424,676 | 31,285,381 | 18,139,295 |
| 1986 | 55,717,802 | 40,098,283 | 15,619,519 |
| 1987 | 58,779,671 | 53,906,821 | 4,872,850 |
| Total | $263,135,323 | $235,990,060 | $27,145,263 |

**1988 Development**

| Accident-Year | Developed Reserve At 12/87 | Developed Reserve At 12/88 | Reserve Redundency/ (Deficiency) |
|---|---|---|---|
| 1976 | | Not Available | |
| 1977 | | Not Available | |
| 1978 | | Not Available | |
| 1979 | | Not Available | |
| 1980 | $ 18,394,769 | $ 18,857,045 | $ (462,276) |
| 1981 | 17,562,720 | 17,325,608 | 237,112 |
| 1982 | 27,270,951 | 27,405,305 | (134,354) |
| 1983 | 25,378,915 | 23,973,118 | 1,405,797 |
| 1984 | 26,766,822 | 23,138,499 | 3,628,323 |
| 1985 | 37,957,859 | 31,285,381 | 6,672,478 |
| 1986 | 46,424,124 | 40,098,283 | 6,325,841 |
| 1987 | 58,779,671 | 53,906,821 | 4,872,850 |
| Total | $258,535,831 | $235,990,060 | $22,545,771 |

## Exhibit 7F
## South Carolina Reserve Development

**Inception to 6/88**

| Fiscal Accident-Year Ending | Original Reserve | Developed Reserve | Reserve Redundency/ (Deficiency) |
|---|---|---|---|
| 1976 | $ 2,126,101 | $ 2,619,662 | $( 493,561) |
| 1977 | NOT AVAILABLE | 2,078,664 | |
| 1978 | NOT AVAILABLE | 4,180,987 | |
| 1979 | NOT AVAILABLE | 3,509,771 | |
| 1980 | 3,737,827 | 4,897,801 | (1,159,974) |
| 1981 | 3,842,800 | 4,802,609 | (959,809) |
| 1982 | 3,869,282 | 5,795,267 | (1,925,985) |
| 1983 | 4,416,289 | 7,791,537 | (3,375,248) |
| 1984 | 5,021,646 | 7,959,234 | (2,937,588) |
| 1985 | 9,780,856 | 7,984,509 | 1,796,347 |
| 1986 | 11,369,569 | 10,440,321 | 929,248 |
| 1987 | 11,879,608 | 9,752,243 | 2,127,365 |
| 1988 | 13,527,519 | 10,791,035 | 2,736,484 |
| Total | $69,571,497 | $72,834,218 | $(3,262,721) |

## Exhibit 7G
## Texas Reserve Development

| Accident-Year | Inception to 12/88 Original Reserve | Inception to 12/88 Developed Reserve 12/88 | Inception to 12/88 Reserve Redundency/ (Deficiency) | 1988 Development Developed Reserve 12/87 | 1988 Development Developed Reserve 12/88 | 1988 Development Reserve Redundency/ (Deficiency) |
|---|---|---|---|---|---|---|
| 1976 | $ 5,767,277 | $ 5,221,059 | $ 546,218 | $ 5,221,059 | $ 5,221,059 | $ 0 |
| 1977 | 9,211,976 | 9,089,105 | 122,871 | 9,089,105 | 9,089,105 | 0 |
| 1978 | 8,819,748 | 9,241,901 | (422,153) | 9,241,901 | 9,241,901 | 0 |
| 1979 | 6,451,681 | 10,668,289 | (4,216,608) | 10,668,289 | 10,668,289 | 0 |
| 1980 | 3,728,214 | 10,978,531 | (7,250,317) | 10,978,531 | 10,978,531 | 0 |
| 1981 | 3,380,338 | 10,340,848 | (6,960,510) | 10,340,848 | 10,340,848 | 0 |
| 1982 | 3,342,294 | 8,862,144 | (5,519,850) | 8,862,144 | 8,862,144 | 0 |
| 1983 | 3,944,716 | 8,439,720 | (4,495,004) | 8,439,720 | 8,439,720 | 0 |
| 1984 | 8,628,249 | 12,161,219 | (3,532,970) | 11,149,623 | 12,161,219 | (1,011,596) |
| 1985 | 23,864,797 | 27,092,461 | (3,227,664) | 23,864,797 | 27,092,461 | (3,227,664) |
| 1986 | 33,923,405 | 33,923,405 | 0 | 33,923,405 | 33,923,405 | 0 |
| 1987 | 24,392,395 | 24,392,395 | 0 | 24,392,395 | 24,392,395 | 0 |
| Total | $135,455,090 | $170,411,077 | $(34,955,987) | $166,171,817 | $170,411,077 | $(4,239,260) |

## Exhibit 8

## Actual Paid in 1986, 1987, 1988 for accident years 1985 and prior compared to expected paid based on 1985 reserves

| State | Expected | Actual | Actual to Expected Percent |
|---|---|---|---|
| Florida | $ 31,977,000 | $ 28,614,234 | 89.5% |
| Massachusetts | 280,380,277 | 198,809,370 | 70.9 |
| New Hampshire | 22,127,869 | 25,849,403 | 116.8 |
| New York | 175,555,000 | 73,198,744 | 41.7 |
| Rhode Island | 69,103,646 | 33,691,442 | 48.8 |
| South Carolina* | 13,273,490 | 12,206,430 | 92.0 |
| Texas | 29,985,756 | 34,317,356 | 114.4 |
| Wisconsin | 42,217,667 | 39,364,885 | 93.2 |

*Fiscal-year ending 6/86 reserves, actual paid during fiscal accident years ending 6/87 and 6/88

## Exhibit 9
## Cumulative Payout Pattern

| Year | Florida | Kansas | New Hampshire | New York | Rhode Island | South Carolina | Texas | Virginia |
|---|---|---|---|---|---|---|---|---|
| Initial year | 0.8% | 8.5% | 0.2% | 0.4% | 0.1% | 0.8% | 0.5% | 0.3% |
| +1 | 6.6 | 38.4 | 2.3 | 0.8 | 2.7 | 6.7 | 4.2 | 5.3 |
| 2 | 22.2 | 69.5 | 10.1 | 2.0 | 7.6 | 22.8 | 15.7 | 25.2 |
| 3 | 46.3 | 84.2 | 18.9 | 5.0 | 16.7 | 41.0 | 28.2 | 60.1 |
| 4 | 67.7 | 96.4 | 32.2 | 11.5 | 27.5 | 66.4 | 42.5 | 80.1 |
| 5 | 78.8 | 98.1 | 45.0 | 18.9 | 43.1 | 81.6 | 57.4 | 95.0 |
| 6 | 88.4 | 99.8 | 54.5 | 26.3 | 54.2 | 87.2 | 68.4 | 100.0 |
| 7 | 92.3 | 100.0 | 63.2 | 35.3 | 65.3 | 90.4 | 74.5 | |
| 8 | 95.2 | | 69.3 | 43.7 | 70.9 | 93.9 | 78.0 | |
| 9 | 97.5 | | 73.8 | 49.9 | 74.5 | 96.2 | 80.7 | |
| 10 | 98.8 | | 78.0 | 56.5 | 77.9 | 98.1 | 84.0 | |
| 11 | 100.0 | | 81.4 | 62.3 | 80.7 | 100.0 | 87.9 | |
| 12 | | | 83.5 | 67.0 | 84.7 | | 91.8 | |
| 13 | | | 84.3 | 72.4 | 87.0 | | 95.9 | |
| 14 | | | 85.8 | 77.9 | 89.2 | | 97.9 | |
| 15 | | | 87.8 | 81.5 | 91.4 | | 100.0 | |
| 16 | | | 90.1 | 85.2 | 93.5 | | | |
| 17 | | | 92.5 | 89.2 | 95.7 | | | |
| 18 | | | 95.0 | 93.3 | 97.8 | | | |
| 19 | | | 97.2 | 97.1 | 100.0 | | | |
| 20 | | | 99.1 | 100.0 | | | | |
| 21 | | | 100.0 | | | | | |
| **Median Payout Term-Years** | 3.2 | 1.4 | 5.5 | 9.0 | 5.6 | 3.4 | 4.5 | 2.7 |

## Exhibit 10
## Discounted Reserves

| Year-End 1988 | Florida | Kansas(1) | Massachusetts | New Hampshire | New York(2) |
|---|---|---|---|---|---|
| Invested Assets | $67,229,662 | $8,833,464 | $510,870,154 | $ 51,630,843 | $ 566,199,755 |
| Discounted Reserves | 77,749,620 | 4,699,578 | 696,225,886 | 46,760,123 | 790,038,051 |
| Difference | (10,519,958) | 4,133,886 | (185,355,732) | 4,870,720 | (223,838,296) |

| Year-End 1988 | Pennsylvania(3) | Rhode Island(2) | South Carolina(1) | Texas | Virginia(2) | Wisconsin |
|---|---|---|---|---|---|---|
| Invested Assets | $62,179,588 | $112,005,943 | $ 32,537,630 | $127,469,011 | $ 7,320,706 | $86,533,226 |
| Discounted Reserves | 57,853,029 | 178,113,288 | 31,667,924 | 85,182,576 | 2,217,135 | 74,490,522 |
| Difference | 4,326,559 | (66,107,345) | 869,706 | 42,286,435 | 5,103,571 | 12,042,704 |

(1) Fiscal year ending 6-30-88
(2) Invested assets include stablilization reserve fund
(3) Statutory reserve discounted at 6%

## Exhibit 11
## Current Invested Assets vs. Reserve Runoff

| | Florida | | Massachusetts | |
|---|---|---|---|---|
| Year | Estimated Paid | Invested Assets | Estimated Paid | Invested Assets |
| 1988 | | $ 67,229,662 | | $510,870,154 |
| 1989 | $18,962,000 | 50,882,600 | $95,133,679 | 431,337,850 |
| 1990 | 21,110,000 | 33,807,797 | 94,698,030 | 358,554,654 |
| 1991 | 18,166,000 | 18,322,893 | 92,460,320 | 274,809,579 |
| 1992 | 13,320,000 | 6,455,973 | 85,062,515 | 185,735,629 |
| 1993 | 8,007,000 | (1,039,042) | 74,403,176 | 96,283,340 |
| 1994 | 5,758,000 | | 61,459,875 | 11,476,263 |
| 1995 | 3,888,000 | | 49,339,253 | (67,296,145) |
| 1996 | 2,854,000 | | 36,714,870 | |
| 1997 | 2,199,000 | | 27,656,622 | |
| 1998 | 1,275,000 | | 21,476,651 | |
| 1999 | 566,000 | | 17,653,322 | |
| 2000 | | | 14,139,969 | |
| 2001 | | | 9,511,599 | |
| 2002 | | | 6,300,171 | |
| 2003 | | | 4,245,259 | |
| 2004 | | | 2,444,356 | |
| 2005 | | | 1,523,116 | |
| 2006 | | | 1,010,971 | |
| 2007 | | | 992,131 | |
| 2008 | | | | |
| **Remaining Liability** | $17,579,042 | | $696,225,886 | |

## Exhibit 11
## Current Invested Assets vs. Reserve Runoff

| | New York | | Rhode Island | |
|---|---|---|---|---|
| Year | Estimated Paid | Invested Assets | Estimated Paid | Invested Assets |
| 1988 | | $566,199,755 | | $112,005,943 |
| 1989 | $ 63,675,000 | 528,001,785 | $ 27,847,952 | 88,527,562 |
| 1990 | 78,562,000 | 498,025,331 | 29,460,631 | 66,108,929 |
| 1991 | 99,697,000 | 444,155,510 | 32,248,356 | 39,119,263 |
| 1992 | 118,081,000 | 366,944,709 | 31,748,061 | 10,482,977 |
| 1993 | 106,918,000 | 293,792,142 | 28,957,102 | (17,640,248) |
| 1994 | 93,286,000 | 227,540,240 | 21,799,893 | |
| 1995 | 77,619,000 | 170,858,985 | 16,979,410 | |
| 1996 | 75,101,000 | 111,480,047 | 10,961,731 | |
| 1997 | 75,774,000 | 45,964,193 | 9,441,931 | |
| 1998 | 75,870,000 | (25,676,285) | 8,191,663 | |
| 1999 | 74,362,000 | | 7,261,117 | |
| 2000 | 71,922,000 | | 6,260,816 | |
| 2001 | 71,660,000 | | 5,382,685 | |
| 2002 | 76,936,000 | | 4,760,973 | |
| 2003 | 83,707,000 | | 4,174,751 | |
| 2004 | 91,448,000 | | 3,694,216 | |
| 2005 | 97,896,000 | | 3,105,652 | |
| 2006 | 93,554,000 | | 2,323,305 | |
| 2007 | 69,228,000 | | 1,294,753 | |
| 2008 | 36,265,000 | | | |
| Remaining Liability | $792,654,285 | | $123,273,143 | |

## Exhibit 12A
## Florida Rate Filings for Physicians and Surgeons

| Year | Percent Asked For | Percent Approved | Date Approved, Disapproved, or Pending |
|---|---|---|---|
| 1977 | | | |
| 1978 | 20.9% | 20.9% | 7-9-78 |
| 1979 | -24.8 | -24.8 | 5-28-79 |
| 1980 | -25.0 | -25.0 | 5-15-80 |
| 1981 | 10.0 | 10.0 | 6-29-81 |
| 1982 | 30.4 | 30.4 | 9-9-82 |
| 1983 | 25.4 | 25.4 | 6-28-83 |
| 1984 | 77.6 | 77.6 | 6-1-84 |
| 1985 | 46.4 | 46.4 | 7-1-85 |
| 1986* | 94.0 | 0.0 | 6-29-86 |
| 1987 | 20.0 | 10.0 | 7-1-87 |
| 1988 | 21.0 | 21.0 | 6-29-88 |

* Dental Classes only

## Florida Rate Filings for Hospitals and Other Facilities

| Year | Percent Asked For | Percent Approved | Date Approved, Disapproved, or Pending |
|---|---|---|---|
| 1977 | NO ACTIVITY | | |
| 1978 | -8.6% | -8.6% | 7-9-78 |
| 1979 | -19.6 | -19.6 | 5-28-79 |
| 1980 | -25.0 | -25.0 | 5-15-80 |
| 1981 | 17.3 | 17.3 | 6-29-81 |
| 1982 | 29.5 | 29.5 | 9-9-82 |
| 1983 | 50.4 | 50.4 | 6-28-83 |
| 1984 | 41.4 | 41.4 | 6-1-84 |
| 1985 | 6.2 | 6.2 | 7-1-85 |
| 1986 | NO ACTIVITY | | |
| 1987 | 57.0 | 14.0 | 7-1-87 |
| 1988 | 98.0 | 66.7 | 6-29-88 |

## Exhibit 12B
## Massachusetts Rate Filings for Physicians and Surgeons

| Year | Percent Asked For | Percent Approved | Date Approved, Disapproved, or Pending* |
|---|---|---|---|
| 1977 | | 7.3% | |
| 1978 | | 0.0 | |
| 1979 | | 0.0 | |
| 1980 | | 10.0 | |
| 1981 | | 0.0 | |
| 1982 | | 9.1 | |
| 1983 | 162.0% | 42.0 | 5-18-84 Appealed |
| 1983 Supplement | 188.0 | 68.1 | 6-11-86 |
| 1984 | 41.6 | 10.9 | 6-11-86 |
| 1985 | 71.1 | 23.6 | 3-4-87 |
| 1986 | 10.3 | 8.7 | 3-4-87 |
| 1987 | 10.0 | 6.5 | 3-4-87 |
| 1988 | 8.6 | 0.0 | 3-88 |

* Amount requested and final decision date not reported for 1977-1982

## Exhibit 12C
## New Hampshire Rate Filings for Physicians and Surgeons

| Year | | Percent Asked For | Percent Approved | Date Approved, Disapproved, or Pending |
|---|---|---|---|---|
| 1977 | | NO ACTIVITY | | |
| 1978 | | NO ACTIVITY | | |
| 1979 | | NO ACTIVITY | | |
| 1980 | | 45.0% | 45.0% | 6-24-80 |
| 1981 | | 50.0 | 50.0 | 6-2-81 |
| 1982 | | 70.0 | 70.0 | 6-9-82 |
| 1983 | | 30.0 | 30.0 | 6-83 |
| 1984 | Basic | 5.1 | 5.1 | 6-13-84 |
| | Excess | 15.0 | 15.0 | 6-13-84 |
| 1985 | | NO ACTIVITY | | |
| 1986 | | 9.3 | 0.0 | 9-86 |
| 1987 | | 12.2 | 12.2 | 6-87 |
| 1988 | | 8.9 | 8.9 | 6-15-88 |

## Exhibit 12D
## New York Rate Filings

| Year | Percent Asked For | Percent Approved | Date Approved, Disapproved, or Pending |
|---|---|---|---|
| 1977 | 90.0% | 15.5% | 6-77 |
| 1978 | 98.0 | Disapproved | 6-78 |
| 1979 | 104.0 | Disapproved | 6-79 |
| 1980 | 186.0 | Disapproved | 6-80 |
| 1981 | 210.0 | 58.5 | 10-81 |
| 1982 | 243.0 | 15.0 | 12-82 |
| 1983 | 180.0 | 83.3 | 1-85 |
| 1984 | 62.0 | 52.3 | 1-85 |
| 1985 | 128.0 | 14.0 | 7-86 |
| 1986 | 135.0 | 9.0 | 7-86 |
| 1987 | 115.0 | 9.0 | 7-87 |
| 1988 | 77.0 | 5.0 | Pending |

## Exhibit 12E
## Rhode Island Rate Filings

| Year | | Percent Asked For | Percent Approved | Date Approved, Disapproved, or Pending |
|---|---|---|---|---|
| 1977 | | NO ACTIVITY | | |
| 1978 | | 34.1% | | No hearing |
| 1979 | | 9.7 | 9.7% | 6-27-79 |
| 1980 | | 25.3 | | Withdrawn |
| 1981 | Basic | 7.4 | | |
| | Excess | 12.7 | | |
| | Total | 21.0 | 12.7 | 6-17-81 |
| 1982 | Basic | 41.3 | 23.1 | 6-23-82 |
| 1983 | Basic | 43.3 | 24.0 | 6-30-83 |
| | Excess | 24.7 | | |
| 1984 | Basic | 44.6 | 11.5 | 6-27-84 |
| | Excess | 25.9 | 16.7 | |
| 1985 | Basic | 101.3 | 30.0 | 6-28-85 |
| | Excess | 14.8 | 14.8 | |
| 1986 | Total | 91.4 | 36.1 | 7-1-87 |
| 1987 | Basic | 78.0 | 5.6 | 7-1-87 |
| | Excess | 9.3 | 28.9 | |
| 1988 | Total | 55.3 | 19.9 | 6-30-88 |

## Exhibit 12F
## South Carolina Rate Filings

| Year | | Percent Asked For | Percent Approved | Date Approved, Disapproved, or Pending |
|---|---|---|---|---|
| 1977 | Physicians | 50.0% | 50.0% | 7-1-77 |
| 1978 | Hospital | 133.0 | 133.0 | 7-1-78 |
| 1979 | | NO ACTIVITY | | |
| 1980 | | NO ACTIVITY | | |
| 1981 | Physicians | 40.0 | 40.0 | 7-1-81 |
| 1982 | | NO ACTIVITY | | |
| 1983 | Physicians | 25.0 | 25.0 | 7-1-83 |
| | Hospital | 20.0 | 20.0 | 7-1-83 |
| 1984 | | NO ACTIVITY | | |
| 1985 | Physicians | 25.0 | 25.0 | 1-1-85 |
| | Hospital | 40.0 | 40.0 | 1-1-85 |
| 1986 | Physicians | 25.0 | 25.0 | 1-9-86 |
| | Hospital | 45.0 | 45.0 | 1-9-86 |
| 1987 | | NO ACTIVITY | | |
| 1988 | | NO ACTIVITY | | |

## Exhibit 12G
## Texas Rate Filings

| Year | Percent Asked For | Percent Approved | Date Approved, Disapproved, or Pending |
|---|---|---|---|
| 1977 | NO ACTIVITY | | |
| 1978 | NO ACTIVITY | | |
| 1979 | NO ACTIVITY | | |
| 1980 | NO ACTIVITY | | |
| 1981 | 50.0% (A) | Disapproved | 4-16-81 |
| 1982 | NO ACTIVITY | | |
| 1983 | 263.0 (B) | 263.0 | 11-10-83 |
| 1984 | NO ACTIVITY | | |
| 1985 | 50.0 (C) | 50.0 | 5-21-85 |
| | 50.0 (D) | 50.0 | 10-29-85 |
| 1986 | 156.3 (E) | 104.7 | 8-1-86 |
| | 161.9 (F) | 109.9 | 8-1-86 |
| 1987 | 29.8 (E) | 29.8 | 9-25-87 |
| | 12.9 (F) | 12.9 | 9-25-87 |
| 1988 | 11.6 (E) | -4.2 | 2-1-89 |
| | 58.7 (F) | 19.2 | 2-1-89 |

(A) Hospital
(B) Dentists and oral surgeons
(C) Physicians, surgeons, hospitals, and other institutions
(D) Podiatrists
(E) Physicians and other non-institutional health care providers
(F) Hospitals and other institutional health care providers

## Exhibit 12H
## Wisconsin Rate Filings for Physicians

| Year | Percent Asked For | Percent Approved | Date Approved, Disapproved, or Pending |
|---|---|---|---|
| 1984 | 51.5% | 35.0% | 7-1-84 |
| 1985 | 69.6 | 69.6 | 7-1-85 |
| 1986 | 32.2 | 32.2 | 7-1-86 |
| 1987 | 9.8 | 9.8 | 7-1-87 |
| 1988 | 2.5 | 2.5 | 7-1-88 |

## Wisconsin Rate Filings for Hospitals

| Year | Percent Asked For | Percent Approved | Date Approved, Disapproved, or Pending |
|---|---|---|---|
| 1984 | 67.2% | 49.0% | 7-1-84 |
| 1985 | 52.4 | 52.4 | 7-1-85 |
| 1986 | 51.4 | 51.4 | 7-1-86 |
| 1987 | 23.1 | 23.1 | 7-1-87 |
| 1988 | 23.8 | 23.8 | 7-1-88 |

# 1987
# EXHIBITS

## Exhibit 1
## 1987 Market Share

| State | Percent |
|---|---|
| Florida | 10.4% |
| Kansas | 5.9 |
| Massachusetts | 84.5 |
| Minnesota | 0.4 |
| New Hampshire | 52.5 |
| New York | 14.3 |
| Pennsylvania | 3.4 |
| Rhode Island | 75.1 |
| South Carolina | 53.7 |
| Texas | 9.9 |
| Virginia | 2.8 |
| Wisconsin | 46.8 |

## Exhibit 2
## Balance Sheet—Statutory

| Year-End 1987 | Florida | Kansas* | Massachusetts | Minnesota | New Hampshire | New York |
|---|---|---|---|---|---|---|
| Assets | $60,488,565 | $ 8,640,574 | $ 461,970,863 | $ 367,753 | $ 44,561,928 | $ 573,341,553 |
| Liabilities | 60,488,565 | 8,640,574 | 1,247,102,534 | 587,742 | 72,810,141 | 1,350,543,933 |
| Surplus | 0 | 0 | (785,131,671) | (219,989) | (28,248,213) | (777,202,380) |

| Year-End 1987 | Pennsylvania | Rhode Island | South Carolina* | Texas | Virginia | Wisconsin |
|---|---|---|---|---|---|---|
| Assets | $57,922,604 | $ 86,119,207 | $ 25,330,721 | $125,977,991 | $ 3,487,535 | $ 85,089,607 |
| Liabilities | 54,884,799 | 246,092,459 | 42,747,279 | 125,977,991 | 2,624,188 | 105,182,104 |
| Surplus | 3,037,805 | (159,973,252) | (17,416,558) | 0 | 863,347 | (20,092,497) |

* Fiscal year ending June 1987.

## Exhibit 3
## Assets

| Year-End 1987 | Florida | Kansas* | Massachusetts | Minnesota | New Hampshire | New York |
|---|---|---|---|---|---|---|
| **Assets** | $60,488,565 | $ 8,640,574 | $461,970,863 | $ 367,753 | $44,561,928 | $573,341,553 |
| **Invested** | 57,793,285 | 5,629,881 | 389,436,275 | 363,905 | 41,163,912 | 448,415,159 |
| **Bonds** | 54,742,172 | 0 | 359,731,342 | 0 | 32,534,278 | 331,175,765 |
| **Short Term** | 0 | 4,833,429 | 19,246,000 | 0 | 6,508,812 | 114,491,577 |
| **Cash** | 3,051,113 | 796,452 | 10,458,933 | 258,176 | 2,120,822 | 2,747,817 |
| **Other** | 0 | 0 | 0 | 105,729 | 0 | 0 |
| **Non-Invested** | 2,695,280 | 3,010,693 | 72,534,588 | 3,848 | 3,398,016 | 124,926,394 |
| **Premium Balance** | 1,671,055 | 0 | 63,097,087 | 3,848 | 1,358,855 | 118,729,428 |
| **Other** | 1,024,225 | 3,010,693 | 9,437,501 | 0 | 2,039,161 | 6,196,966 |
| **Embedded Yield** | 8.44% | 5.24% | 7.85% | No Bonds | 7.3% | 8.41% |
| **Bond Maturity in Years** | 5.3 | Less Than 1 Yr | 9.5 | No Bonds | 5.0 | 13.8 |

| Year-End 1987 | Pennsylvania | Rhode Island | South Carolina* | Texas | Virginia | Wisconsin |
|---|---|---|---|---|---|---|
| **Assets** | $57,922,604 | $86,119,207 | $ 25,330,721 | $125,977,991 | $ 3,487,535 | $ 85,089,607 |
| **Invested** | 56,753,291 | 79,270,551 | 24,923,319 | 105,936,918 | 3,265,059 | 81,338,182 |
| **Bonds** | 49,575,443 | 67,488,760 | 22,544,229 | 100,921,724 | 1,345,809 | 74,194,388 |
| **Short Term** | 6,676,576 | 0 | 2,255,000 | 3,399,788 | 0 | 6,517,140 |
| **Cash** | 501,272 | 3,317,043 | 123,759 | 1,615,406 | 1,919,250 | 25,654 |
| **Other** | 0 | 8,464,748 | 331 | 0 | 0 | 601,000 |
| **Non-Invested** | 1,169,313 | 6,848,656 | 407,402 | 20,041,073 | 222,476 | 3,751,425 |
| **Premium Balance** | 83,436 | 5,173,068 | 1,330 | 1,614,899 | 181,179 | 1,800,215 |
| **Other** | 1,085,877 | 1,675,588 | 406,072 | 18,426,174 | 41,297 | 1,951,210 |
| **Embedded Yield** | 7.13% | 7.6% | 7.92% | 8.17% | 7.8% | 7.14% |
| **Bond Maturity in Years** | 8.0 | 5.2 | 1.6 | 1.9 | 2.7 | 4.9 |

* Fiscal year ending June 1987.

## Exhibit 4
## Cash Flow

| Year-End 1987 | Florida | Kansas* | Massachusetts | Minnesota | New Hampshire** | New York |
|---|---|---|---|---|---|---|
| **Income** | $26,204,053 | $ 2,425,210 | $179,603,543 | $ 301,234 | $18,744,558 | $96,868,916 |
| **Premium** | 22,170,915 | 2,103,305 | 149,032,252 | 219,648 | 15,531,655 | 61,065,755 |
| **Investment Income** | 4,033,148 | 321,905 | 30,571,291 | 8,790 | 3,005,272 | 33,299,932 |
| **Other Income** | 0 | 0 | 1,430,250 | 72,796 | 207,631 | 2,503,229 |
| **Expenditures** | 17,201,412 | 2,924,093 | 84,801,087 | 50,951 | 10,336,490 | 25,171,358 |
| **Paid Claims** | 9,655,760 | 2,001,196 | 58,477,316 | 0 | 9,163,581 | 13,804,549 |
| **Loss Adj. Exp.** | 5,331,682 | 295,227 | 14,194,623 | 0 | | 9,249,220 |
| **Other Expenses** | 2,213,970 | 627,670 | 12,129,148 | 50,951 | 1,172,909 | 2,117,589 |
| **Net Cash Flow** | 9,002,651 | (498,883) | 94,802,456 | 250,283 | 8,408,068 | 71,697,558 |

| Year-End 1987 | Pennsylvania | Rhode Island | South Carolina* | Texas | Virginia | Wisconsin |
|---|---|---|---|---|---|---|
| **Income** | $12,365,784 | $31,800,603 | $ 12,493,756 | $25,406,245 | $ 2,487,337 | $24,777,216 |
| **Premium** | 8,320,766 | 25,725,972 | 10,609,082 | 18,028,856 | 2,429,143 | 17,386,718 |
| **Investment Income** | 4,045,018 | 6,074,594 | 1,884,686 | 7,375,489 | 58,161 | 6,928,534 |
| **Other Income** | 0 | 37 | (12) | 1,900 | 33 | 461,964 |
| **Expenditures** | 8,200,510 | 16,112,981 | 6,647,081 | 25,505,816 | 591,436 | 12,694,954 |
| **Paid Claims** | 4,909,363 | 11,133,568 | 3,588,739 | 15,724,278 | 63,840 | 7,589,072 |
| **Loss Adj. Exp.** | 2,553,094 | 3,287,259 | 2,062,034 | 2,385,164 | 463,431 | 3,896,411 |
| **Other Expenses** | 738,053 | 1,692,154 | 996,308 | 3,396,374 | 64,165 | 1,209,471 |
| **Net Cash Flow** | 4,165,274 | 15,687,622 | 5,846,675 | 3,900,429 | 1,895,901 | 12,082,262 |

* Fiscal year ending June 1986.
** Paid claims also include loss adjustment expenses paid

## Exhibit 5
## Loss and LAE Reserves

| Year-End 1987 | Florida | Kansas* | Massachusetts | Minnesota | New Hampshire** | New York |
|---|---|---|---|---|---|---|
| **Loss and LAE Reserves** | $87,303,536 | $ 6,457,050 | $1,166,854,940 | $ 374,900 | $62,317,887 | $1,268,756,542 |
| **Loss Reserves** | 64,865,541 | 4,783,000 | 832,473,842 | 374,900 | 62,317,887 | 973,558,662 |
| **LAE Reserves** | 22,437,995 | 1,674,050 | 334,381,098 | 0 | | 295,197,880 |
| **Loss Reserves** | 64,865,541 | 4,783,000 | 832,473,842 | | 62,317,887 | 973,558,662 |
| **Pending** | 30,316,972 | 4,543,000 | 350,723,175 | 251,500 | 14,526,714 | 190,418,680 |
| **IBNR** | $34,548,569 | $ 240,000 | $ 481,750,667 | $ 123,400 | $47,791,173 | $ 783,139,982 |
| **Pending Claims** | Not Reported | 87 | Not Reported | 2 | 338 | 2,092 |
| **Average Pending Claim** | | $ 52,218 | | $ 125,750 | $ 42,978 | $ 91,022 |

| Year-End 1987 | Pennsylvania | Rhode Island | South Carolina* | Texas | Virginia | Wisconsin |
|---|---|---|---|---|---|---|
| **Loss and LAE Reserves** | $51,657,952 | $228,609,918 | $ 36,138,551 | $102,396,395 | $ 986,059 | $ 95,022,870 |
| **Loss Reserves** | 38,042,293 | 208,186,333 | 26,796,898 | 78,957,441 | 636,167 | 67,055,594 |
| **LAE Reserves** | 13,615,659 | 20,423,585 | 9,341,653 | 23,438,954 | 349,892 | 27,967,276 |
| **Loss Reserves** | 38,042,293 | 208,186,333 | 26,796,898 | 78,957,441 | 636,167 | 67,055,594 |
| **Pending** | 16,588,905 | 51,429,626 | 8,626,158 | 25,657,953 | 3,500 | 21,288,946 |
| **IBNR** | $21,453,388 | $156,756,707 | $ 18,170,740 | $ 53,299,488 | $ 632,667 | $ 45,766,648 |
| **Pending Claims** | 623 | 1,231 | 596 | 724 | 1 | 1,216 |
| **Average Pending Claim** | $ 26,627 | $ 41,779 | $ 14,473 | $ 35,439 | $ 3,500 | $ 17,507 |

* Fiscal year ending June 1987.
** LAE Reserves included in Loss Reserves, and Pending and IBNR Loss Reserves also include LAE Reserves

## Exhibit 6
## Pending Claims

| Calendar Year | Florida | Kansas* | Massachusetts | Minnesota | New Hampshire | New York |
|---|---|---|---|---|---|---|
| Prior to 1977 | | | | | 4 | 183 |
| 1977 | | | | | 8 | 129 |
| 1978 | | | | | 4 | 134 |
| 1979 | | | | | 14 | 166 |
| 1980 | | | | | 34 | 185 |
| 1981 | | | | | 29 | 242 |
| 1982 | | 1 | | | 31 | 239 |
| 1983 | | 1 | | | 34 | 247 |
| 1984 | | 2 | | | 45 | 164 |
| 1985 | | 6 | | | 39 | 234 |
| 1986 | | 24 | | 1 | 38 | 129 |
| 1987 | | 53 | | 1 | 58 | 40 |
| Total | Not Reported | 87 | Not Reported | 2 | 338 | 2,092 |

| Calendar Year | Pennsylvania | Rhode Island | South Carolina* | Texas | Virginia | Wisconsin |
|---|---|---|---|---|---|---|
| Prior to 1977 | | 20 | | 3 | | 11 |
| 1977 | 2 | 20 | | 8 | | 15 |
| 1978 | 12 | 26 | 8 | 19 | | 23 |
| 1979 | 8 | 30 | 12 | 13 | | 20 |
| 1980 | 20 | 62 | 13 | 23 | | 25 |
| 1981 | 45 | 121 | 17 | 31 | | 62 |
| 1982 | 100 | 173 | 25 | 29 | | 151 |
| 1983 | 126 | 209 | 98 | 45 | | 190 |
| 1984 | 127 | 193 | 135 | 88 | | 285 |
| 1985 | 138 | 139 | 103 | 213 | | 141 |
| 1986 | 33 | 145 | 116 | 184 | | 120 |
| 1987 | 12 | 93 | 69 | 68 | 1 | 173 |
| Total | 623 | 1,231 | 596 | 724 | 1 | 1,216 |

* Fiscal year ending June 1987

## Exhibit 7A
## Florida Reserve Development

Inception to 12/87

| Accident-Year Ending | Original Reserve | Developed Reserve At 12/87 | Reserve Redundency/ (Deficiency) |
|---|---|---|---|
| 1976 | $ 6,164,771 | $ 7,295,771 | $ (1,131,000) |
| 1977 | 9,096,805 | 6,442,805 | 2,654,000 |
| 1978 | 6,562,029 | 6,184,771 | 377,258 |
| 1979 | 7,392,625 | 8,289,452 | (896,827) |
| 1980 | 5,808,681 | 11,033,881 | (5,225,200) |
| 1981 | 4,190,641 | 11,871,641 | (7,68[illegible]) |
| 1982 | 4,363,976 | 18,149,984 | (13,786,008) |
| 1983 | 11,616,665 | 12,178,665 | (562,000) |
| 1984 | 9,723,880 | 8,566,710 | 1,157,170 |
| 1985 | 4,652,588 | 7,703,729 | (3,051,141) |
| 1986 | 10,251,607 | 13,123,607 | (2,872,000) |
| Total | $79,824,268 | $110,841,016 | $(31,016,748) |

1987 Development

| Accident-Year Ending | Developed Reserve At 12/86 | Developed Reserve At 12/87 | Reserve Redundency/ (Deficiency) |
|---|---|---|---|
| 1976 | $ 7,412,000 | $ 7,295,771 | $ 116,229 |
| 1977 | 6,604,000 | 6,442,805 | 161,195 |
| 1978 | 6,375,000 | 6,184,771 | 190,229 |
| 1979 | 8,562,000 | 8,289,452 | 272,548 |
| 1980 | 10,902,000 | 11,033,881 | (131,881) |
| 1981 | 12,199,000 | 11,871,641 | 327,359 |
| 1982 | 19,252,000 | 18,149,984 | 1,102,016 |
| 1983 | 12,995,000 | 12,178,665 | 816,335 |
| 1984 | 9,572,000 | 8,566,710 | 1,005,290 |
| 1985 | 7,350,000 | 7,703,729 | (353,729) |
| 1986 | 10,661,000 | 13,123,607 | (2,462,607) |
| Total | $111,884,000 | $110,841,016 | $ 1,042,984 |

## Exhibit 7B
## Kansas Reserve Development

Inception to 6/87

| Accident-Year | Developed Original Reserve | Reserve Reserve At 12/87 | Redundency/ (Deficiency) |
|---|---|---|---|
| 1977 | $ 231,980 | $ 16,044 | $ 215,936 |
| 1978 | 583,730 | 321,704 | 262,026 |
| 1979 | 861,487 | 459,923 | 401,564 |
| 1980 | 815,528 | 1,040,462 | (224,934) |
| 1981 | 706,474 | 911,826 | (205,352) |
| 1982 | 1,711,846 | 1,846,307 | (134,461) |
| 1983 | 2,258,250 | 1,882,045 | 376,205 |
| 1984 | 3,206,250 | 2,366,016 | 840,234 |
| 1985 | 3,727,950 | 2,397,360 | 1,330,590 |
| 1986 | 2,282,700 | 2,783,816 | (501,116) |
| Total | $16,386,195 | $14,025,503 | $2,360,692 |

## Exhibit 7C
## New Hampshire Reserve Development

Inception to 12/87

| Accident-Year | Original Reserve | Developed Reserve At 12/87 | Reserve Redundency/ (Deficiency) |
|---|---|---|---|
| 1976 | Not Available | $ 3,616,213 | |
| 1977 | Not Available | 4,169,727 | |
| 1978 | Not Available | 8,036,286 | |
| 1979 | Not Available | 9,023,047 | |
| 1980 | Not Available | 10,776,029 | |
| 1981 | $ 2,664,765 | 6,007,506 | $ (3,342,741) |
| 1982 | 6,565,788 | 10,718,655 | (4,152,867) |
| 1983 | 12,413,053 | 8,072,231 | 4,340,822 |
| 1984 | 9,245,517 | 8,953,831 | 291,686 |
| 1985 | 14,309,916 | 9,440,889 | 4,869,027 |
| 1986 | 13,444,650 | 11,891,035 | 1,553,615 |
| Total* | $58,643,689 | $55,084,147 | $ 3,559,542 |

* Total 1981-1986 only

1987 Development

| Accident-Year | Developed Reserve At 12/86 | Developed Reserve At 12/87 | Reserve Redundency/ (Deficiency) |
|---|---|---|---|
| 1976 | $ 3,363,910 | $ 3,616,213 | $ (252,303) |
| 1977 | 3,518,476 | 4,169,727 | (651,251) |
| 1978 | 8,513,537 | 8,036,286 | 477,251 |
| 1979 | 8,279,818 | 9,023,047 | (743,229) |
| 1980 | 9,981,608 | 10,776,029 | (794,421) |
| 1981 | 6,025,096 | 6,007,506 | 17,590) |
| 1982 | 7,082,688 | 10,718,655 | (3,635,967) |
| 1983 | 8,069,379 | 8,072,231 | (2,852) |
| 1984 | 8,611,075 | 8,953,831 | (342,756) |
| 1985 | 11,332,367 | 9,440,889 | 1,891,478 |
| 1986 | 13,444,650 | 11,891,035 | 1,553,615 |
| Total | $88,222,604 | $90,705,449 | $(2,482,845) |

## Exhibit 7D
## New York Reserve Development

Inception to 12/87

| Accident-Year | Original Reserve | Developed Reserve At 12/87 | Reserve Redundency/ (Deficiency) |
|---|---|---|---|
| 1975 | $ 8,084,387 | $ 27,272,121 | $(19,187,734) |
| 1976 | 44,007,000 | 64,132,882 | (20,125,882) |
| 1977 | 13,614,000 | 52,341,036 | (38,727,036) |
| 1978 | 23,668,000 | 48,201,405 | (24,533,405) |
| 1979 | 40,633,000 | 60,137,757 | (19,504,757) |
| 1980 | 42,346,997 | 60,442,547 | (18,095,550) |
| 1981 | 49,079,674 | 70,756,240 | (21,676,566) |
| 1982 | 65,175,744 | 56,254,400 | 8,921,344 |
| 1983 | 56,309,053 | 62,051,536 | (5,742,483) |
| 1984 | 30,476,829 | 36,563,531 | (6,086,702) |
| 1985 | 127,759,152 | 126,378,385 | 1,380,767 |
| 1986 | 410,452,381 | 346,009,453 | 64,442,928 |
| Total | $911,606,217 | $1,010,541,293 | $(98,935,076) |

1987 Development

| Accident-Year Ending | Developed Reserve At 12/86 | Developed Reserve At 12/87 | Reserve Redundency/ (Deficiency) |
|---|---|---|---|
| 1975 | $ 26,489,746 | $ 27,272,121 | $ (782,375) |
| 1976 | 67,658,561 | 64,132,882 | 3,525,679 |
| 1977 | 54,711,322 | 52,341,036 | 2,370,286 |
| 1978 | 52,739,596 | 48,201,405 | 4,538,191 |
| 1979 | 63,579,337 | 60,137,757 | 3,441,580 |
| 1980 | 66,156,355 | 60,442,547 | 5,713,808 |
| 1981 | 74,270,781 | 70,756,240 | 3,514,541 |
| 1982 | 60,479,229 | 56,254,400 | 4,224,829 |
| 1983 | 63,456,848 | 62,051,536 | 1,405,312 |
| 1984 | 35,692,499 | 36,563,531 | (871,032) |
| 1985 | 126,825,508 | 126,378,385 | 447,123 |
| 1986 | 410,452,381 | 346,009,453 | 64,442,928 |
| Total | $1,102,512,163 | $1,010,541,293 | $91,970,870 |

## Exhibit 7E
## Rhode Island Reserve Development

Inception to 12/87

| Accident-Year | Original Reserve | Developed Reserve At 12/87 | Reserve Redundency/ (Deficiency) |
|---|---|---|---|
| 1976 | | Not Available | |
| 1977 | | Not Available | |
| 1978 | | Not Available | |
| 1979 | | Not Available | |
| 1980 | $ 10,128,614 | $ 18,394,769 | $ (8,266,155) |
| 1981 | 11,979,104 | 17,562,720 | (5,583,616) |
| 1982 | 18,373,088 | 27,270,951 | (8,897,863) |
| 1983 | 23,186,372 | 25,378,915 | (2,192,543) |
| 1984 | 35,545,996 | 26,766,822 | 8,779,174 |
| 1985 | 49,424,676 | 37,957,859 | 11,466,817 |
| 1986 | 55,717,802 | 46,424,124 | 9,293,678 |
| Total | $204,355,652 | $199,756,160 | $ 4,599,492 |

1987 Development

| Accident-Year Ending | Developed Reserve At 12/86 | Developed Reserve At 12/87 | Reserve Redundency/ (Deficiency) |
|---|---|---|---|
| 1976 | | Not Available | |
| 1977 | | Not Available | |
| 1978 | | Not Available | |
| 1979 | | Not Available | |
| 1980 | $ 20,088,500 | $ 18,394,769 | $ 1,693,731 |
| 1981 | 18,973,280 | 17,562,720 | 1,410,560 |
| 1982 | 27,696,332 | 27,270,951 | 425,381 |
| 1983 | 27,063,041 | 25,378,915 | 1,684,126 |
| 1984 | 30,265,087 | 26,766,822 | 3,498,265 |
| 1985 | 41,345,909 | 37,957,859 | 3,388,050 |
| 1986 | 46,442,965 | 46,424,124 | 18,841 |
| Total | $211,875,114 | $199,756,160 | $12,118,954 |

## Exhibit 7F
## South Carolina Reserve Development

Inception to 6/88

| Fiscal Accident-Year Ending | Original Reserve | Developed Reserve 6/88 | Reserve Redundency/ (Deficiency) |
|---|---|---|---|
| 1976 | $ 734,528 | $ 5,517,844 | $(4,783,316) |
| 1977 | 4,372,022 | 2,732,656 | 1,639,366 |
| 1978 | 3,146,166 | 4,873,350 | (1,727,184) |
| 1979 | 2,390,504 | 3,529,727 | (1,139,223) |
| 1980 | 3,545,367 | 4,918,219 | (1,372,852) |
| 1981 | 4,003,671 | 4,822,374 | (818,703) |
| 1982 | 3,246,918 | 5,808,344 | (2,561,426) |
| 1983 | 5,359,823 | 7,829,126 | (2,469,303) |
| 1984 | 8,390,720 | 7,969,505 | 421,215 |
| 1985 | 9,735,251 | 7,846,412 | 1,888,839 |
| 1986 | 13,539,033 | 10,480,626 | 3,058,407 |
| 1987 | 11,941,806 | 9,800,878 | 2,140,928 |
| Total | $70,405,809 | $76,129,061 | $(5,723,252) |

## Exhibit 7G
## Texas Reserve Development

| Accident-Year | Original Reserve | Developed Reserve 12/87 | Reserve Redundency/ (Deficiency) |
|---|---|---|---|
| | Inception to 12/87 | | |
| 1976 | $ 5,767,277 | $ 5,221,059 | $ 546,218 |
| 1977 | 9,211,976 | 9,089,105 | 122,871 |
| 1978 | 8,819,748 | 9,241,901 | (422,153) |
| 1979 | 6,451,681 | 10,668,289 | (4,216,608) |
| 1980 | 3,728,214 | 10,978,531 | (7,250,317) |
| 1981 | 3,380,338 | 10,340,848 | (6,960,510) |
| 1982 | 3,342,294 | 8,862,144 | (5,519,850) |
| 1983 | 3,944,716 | 8,439,720 | (4,495,004) |
| 1984 | 8,628,249 | 11,149,623 | (2,521,374) |
| 1985 | 23,864,797 | 23,864,797 | 0 |
| 1986 | 33,923,405 | 33,923,406 | (1) |
| Total | $111,062,695 | $141,779,423 | $(30,716,728) |

| Accident-Year | Developed Reserve 12/85 | Developed Reserve 12/86 | Reserve Redundency/ (Deficiency) |
|---|---|---|---|
| | 1987 Development | | |
| 1976 | $ 5,221,059 | $ 5,221,059 | $ 0 |
| 1977 | 9,089,105 | 9,089,105 | 0 |
| 1978 | 9,241,901 | 9,241,901 | 0 |
| 1979 | 10,455,859 | 10,668,289 | (212,430) |
| 1980 | 10,978,531 | 10,978,531 | 0 |
| 1981 | 8,370,758 | 10,340,848 | (1,970,090) |
| 1982 | 7,042,592 | 8,862,144 | (1,819,552) |
| 1983 | 8,439,717 | 8,439,720 | (3) |
| 1984 | 11,149,623 | 11,149,623 | 0 |
| 1985 | 23,864,797 | 23,864,797 | 0 |
| 1986 | 33,923,405 | 33,923,406 | (1) |
| Total | $137,777,347 | $141,779,423 | $(4,002,075) |

## Exhibit 8
## Cumulative Payout Pattern

| Year | Florida | Kansas* | New Hampshire | New York | Rhode Island | South Carolina* | Texas | Virginia |
|---|---|---|---|---|---|---|---|---|
| Initial year | 0.8% | 7.3% | 0.2% | 0.3% | 0.1% | 0.9% | 0.5% | 6.5% |
| +1 | 7.0 | 35.7 | 2.6 | 0.7 | 2.6 | 6.7 | 4.3 | 29.9 |
| 2 | 23.2 | 67.3 | 12.1 | 1.8 | 7.6 | 22.8 | 16.6 | 62.6 |
| 3 | 46.5 | 83.0 | 21.6 | 4.3 | 16.7 | 41.0 | 28.1 | 81.3 |
| 4 | 68.3 | 96.2 | 35.5 | 9.2 | 28.0 | 63.9 | 42.6 | 95.3 |
| 5 | 79.9 | 98.0 | 48.0 | 16.3 | 44.1 | 77.9 | 58.8 | 100.0 |
| 6 | 87.5 | 99.8 | 57.8 | 23.5 | 54.8 | 83.6 | 69.6 | |
| 7 | 91.4 | 100.0 | 64.8 | 33.3 | 66.3 | 88.4 | 75.7 | |
| 8 | 94.7 | | 69.2 | 42.5 | 71.8 | 94.0 | 79.4 | |
| 9 | 97.2 | | 72.9 | 50.3 | 75.3 | 98.2 | 82.2 | |
| 10 | 98.9 | | 76.2 | 58.0 | 78.6 | 99.3 | 85.7 | |
| 11 | 100.0 | | 78.7 | 63.8 | 81.4 | 100.0 | 89.7 | |
| 12 | | | 81.2 | 69.6 | 84.4 | | 93.1 | |
| 13 | | | 84.1 | 75.6 | 86.7 | | 96.6 | |
| 14 | | | 87.3 | 80.3 | 88.9 | | 98.3 | |
| 15 | | | 90.7 | 83.8 | 91.2 | | 100.0 | |
| 16 | | | 94.0 | 87.5 | 93.4 | | | |
| 17 | | | 96.8 | 92.2 | 95.6 | | | |
| 18 | | | 98.8 | 96.3 | 97.8 | | | |
| 19 | | | 99.8 | 98.7 | 100.0 | | | |
| 20 | | | 100.0 | 100.0 | | | | |
| 21 | | | | | | | | |
| **Median Payout Term-Years** | 3.2 | 1.5 | 5.2 | 9.0 | 5.5 | 3.4 | 4.5 | 1.6 |

* Fiscal year ending June 1987

## Exhibit 9A
## Florida Payout Pattern as Cumulative Percent of Total Incurred

| Calendar Year | Accident Year 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 1.6% | 1.9% | 1.0% | 0.6% | 1.2% | 0.7% | 0.5% | 1.2% | 0.0% | 0.3% | 0.3% | 0.1% | 0.8% |
| 1 | 15.5 | 8.5 | 8.6 | 5.4 | 7.9 | 7.1 | 4.3 | 9.4 | 3.9 | 3.5 | 2.4 | 8.1 | 7.0 |
| 2 | 37.1 | 24.8 | 32.0 | 21.6 | 27.8 | 19.8 | 17.2 | 27.7 | 13.1 | 14.1 | 19.0 | 23.8 | 23.2 |
| 3 | 62.0 | 56.9 | 50.8 | 51.5 | 49.2 | 41.1 | 51.1 | 41.6 | 36.0 | 35.5 | 39.2 | 42.8 | 46.5 |
| 4 | 79.9 | 79.9 | 75.2 | 68.7 | 69.6 | 59.9 | 64.8 | 71.5 | 61.2 | 60.9 | 63.1 | 65.3 | 68.3 |
| 5 | 86.1 | 90.2 | 90.0 | 77.7 | 81.1 | 71.2 | 83.1 | 80.7 | 73.7 | 73.5 | 75.0 | 76.5 | 79.9 |
| 6 | 99.0 | 98.6 | 95.1 | 85.3 | 90.5 | 85.8 | 87.3 | 85.4 | 80.1 | 79.9 | 81.1 | 82.2 | 87.5 |
| 7 | 99.2 | 100.1 | 98.7 | 89.1 | 98.3 | 89.4 | 90.5 | 89.1 | 85.1 | 85.0 | 85.9 | 86.7 | 91.4 |
| 8 | 99.4 | 100.0 | 99.3 | 94.5 | 98.9 | 93.3 | 94.0 | 93.1 | 90.7 | 90.6 | 91.1 | 91.7 | 94.7 |
| 9 | 100.0 | | 100.0 | 97.0 | 99.4 | 96.4 | 96.8 | 96.3 | 94.9 | 94.9 | 95.2 | 95.5 | 97.2 |
| 10 | | | | 98.9 | 99.8 | 98.6 | 98.8 | 98.6 | 98.1 | 98,1 | 98.2 | 98.3 | 98.9 |
| 11 | | | | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Median in Years | 2.6 | 2.8 | 3.0 | 2.9 | 3.0 | 3.5 | 3.0 | 3.3 | 3.6 | 3.6 | 3.5 | 3.3 | 3.2 |

## Exhibit 9B
## New Hampshire Payout Pattern as Cumulative Percent of Total Incurred

| Calendar Year | Accident Year 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | Average |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0.0% | 0.1% | 0.2% | 0.2% | 0.0% | 0.0% | 0.0% | 0.7% | 0.2% |
| 1 | 0.7 | 11.7 | 2.3 | 2.0 | 0.6 | 0.5 | 0.3 | 2.5 | 2.6 |
| 2 | 16.8 | 17.9 | 8.4 | 13.9 | 14.6 | 3.3 | 9.9 | 12.1 | 12.1 |
| 3 | 25.5 | 23.2 | 17.1 | 34.9 | 17.7 | 13.3 | 19.6 | 21.8 | 21.6 |
| 4 | 38.3 | 36.0 | 25.1 | 56.0 | 31.7 | 28.1 | 33.5 | 35.6 | 35.5 |
| 5 | 42.5 | 48.8 | 53.8 | 63.7 | 43.0 | 40.2 | 44.8 | 46.8 | 48.0 |
| 6 | 53.0 | 57.7 | 63.1 | 70.8 | 53.7 | 51.6 | 55.4 | 57.1 | 57.8 |
| 7 | 71.6 | 64.6 | 68.1 | 74.4 | 59.1 | 57.2 | 60.8 | 62.5 | 64.8 |
| 8 | 76.0 | 70.0 | 72.2 | 77.5 | 63.7 | 62.1 | 65.4 | 67.0 | 69.2 |
| 9 | 79.3 | 74.2 | 75.5 | 80.1 | 67.7 | 66.3 | 69.2 | 70.7 | 72.9 |
| 10 | 82.2 | 77.8 | 78.5 | 82.4 | 71.3 | 70.2 | 72.8 | 74.2 | 76.2 |
| 11 | 84.4 | 80.5 | 80.8 | 84.2 | 74.2 | 73.1 | 75.6 | 76.9 | 78.7 |
| 12 | 86.4 | 83.0 | 83.1 | 86.0 | 77.1 | 76.2 | 78.4 | 79.6 | 81.2 |
| 13 | 88.5 | 85.7 | 85.7 | 88.2 | 80.5 | 79.8 | 81.6 | 82.7 | 84.1 |
| 14 | 90.9 | 88.6 | 88.6 | 90.6 | 84.5 | 83.9 | 85.4 | 86.2 | 87.3 |
| 15 | 93.3 | 91.7 | 91.6 | 93.1 | 88.6 | 88.2 | 89.3 | 89.9 | 90.7 |
| 16 | 95.7 | 94.6 | 94.6 | 95.5 | 92.6 | 92.4 | 93.1 | 93.5 | 94.0 |
| 17 | 97.7 | 97.1 | 97.1 | 97.6 | 96.1 | 95.9 | 96.3 | 96.5 | 96.8 |
| 18 | 99.1 | 98.9 | 98.9 | 99.1 | 98.5 | 98.4 | 98.6 | 98.7 | 98.8 |
| 19 | 99.9 | 99.9 | 99.9 | 99.9 | 99.8 | 99.8 | 99.8 | 99.8 | 99.8 |
| 20 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Median in Years | 5.7 | 5.1 | 4.9 | 3.7 | 5.7 | 5.9 | 5.5 | 5.3 | 5.2 |

## Exhibit 9C
## New York Payout Pattern as Cumulative Percent of Total Incurred

| Calendar Year | Accident Year 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0.0% | 0.6% | 0.1% | 0.0% | 0.4% | 0.4% | 0.4% | 0.5% | 0.6% | 0.9% | 0.1% | 0.1% | 0.1% | 0.3% |
| 1 | 0.6 | 1.1 | 0.7 | 0.8 | 0.9 | 0.8 | 0.7 | 0.7 | 1.0 | 1.2 | 0.2 | 0.2 | 0.1 | 0.7 |
| 2 | 1.9 | 2.6 | 2.6 | 2.5 | 2.4 | 2.0 | 1.9 | 1.6 | 2.1 | 2.0 | 0.5 | 0.5 | 0.4 | 1.8 |
| 3 | 4.0 | 8.5 | 8.1 | 6.4 | 5.9 | 4.6 | 3.7 | 4.0 | 4.0 | 3.8 | 1.5 | 1.1 | 0.8 | 4.3 |
| 4 | 11.4 | 15.7 | 11.5 | 14.8 | 13.8 | 11.0 | 7.7 | 7.9 | 9.0 | 10.1 | 3.1 | 2.1 | 1.6 | 9.2 |
| 5 | 17.0 | 24.6 | 19.5 | 20.9 | 22.3 | 19.0 | 11.6 | 12.1 | 16.4 | 17.4 | 11.1 | 10.1 | 9.7 | 16.3 |
| 6 | 23.7 | 31.1 | 26.4 | 29.5 | 28.2 | 25.4 | 16.4 | 20.2 | 24.1 | 25.0 | 19.4 | 18.5 | 18.1 | 23.5 |
| 7 | 31.0 | 39.3 | 42.3 | 40.1 | 33.1 | 31.1 | 27.7 | 30.7 | 34.2 | 34.9 | 30.1 | 29.4 | 29.0 | 33.3 |
| 8 | 48.2 | 48.3 | 51.6 | 45.0 | 38.4 | 41.6 | 37.3 | 39.6 | 42.6 | 43.2 | 39.2 | 38.6 | 38.2 | 42.5 |
| 9 | 53.4 | 56.0 | 56.2 | 48.9 | 49.6 | 51.0 | 46.4 | 48.1 | 50.7 | 51.2 | 47.9 | 47.4 | 47.1 | 50.3 |
| 10 | 62.9 | 60.8 | 59.7 | 60.4 | 60.7 | 59.7 | 54.1 | 55.2 | 57.5 | 57.9 | 55.3 | 54.8 | 54.5 | 58.0 |
| 11 | 66.3 | 62.9 | 70.2 | 68.3 | 68.4 | 65.9 | 59.9 | 60.5 | 62.6 | 62.9 | 60.8 | 60.4 | 60.1 | 63.8 |
| 12 | 69.4 | 75.0 | 77.8 | 74.5 | 74.4 | 71.3 | 65.3 | 65.6 | 67.4 | 67.7 | 65.9 | 65.6 | 65.3 | 69.6 |
| 13 | 84.0 | 83.8 | 83.7 | 79.7 | 79.5 | 76.0 | 70.4 | 70.5 | 72.1 | 72.3 | 70.8 | 70.4 | 70.2 | 75.6 |
| 14 | 93.6 | 89.8 | 87.9 | 83.7 | 83.4 | 79.9 | 74.7 | 74.7 | 76.1 | 76.3 | 75.0 | 74.7 | 74.5 | 80.3 |
| 15 | 94.8 | 91.6 | 90.0 | 86.5 | 86.3 | 83.4 | 79.1 | 79.1 | 80.3 | 80.4 | 79.4 | 79.1 | 79.0 | 83.8 |
| 16 | 96.0 | 93.5 | 92.4 | 89.6 | 89.5 | 87.3 | 84.0 | 84.0 | 84.8 | 85.0 | 84.1 | 84.0 | 83.8 | 87.5 |
| 17 | 97.5 | 96.0 | 95.2 | 93.5 | 93.4 | 92.0 | 90.0 | 90.0 | 90.5 | 90.6 | 90.1 | 90.0 | 90.0 | 92.2 |
| 18 | 98.8 | 98.1 | 97.7 | 96.9 | 96.9 | 96.2 | 95.3 | 95.3 | 95.5 | 95.6 | 95.4 | 95.3 | 95.3 | 96.3 |
| 19 | 99.6 | 99.3 | 99.2 | 99.0 | 98.9 | 98.7 | 98.4 | 98.4 | 98.5 | 98.5 | 98.4 | 98.4 | 98.4 | 98.7 |
| 20 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Median in Years | 8.4 | 8.2 | 7.7 | 9.3 | 9.0 | 8.9 | 9.5 | 9.3 | 8.9 | 8.8 | 9.3 | 9.4 | 9.4 | 9.0 |

## Exhibit 9D
## Rhode Island Payout Pattern as Cumulative Percent of Total Incurred

| Calendar Year | Accident Year 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0.3% | 0.2% | 0.1% | 0.1% | 0.5% | 0.1% | 0.1% | 0.1% | 0.1% | 0.1% | 0.1% | 0.1% | 0.1% |
| 1 | 1.5 | 0.5 | 0.6 | 1.0 | 2.0 | 1.0 | 7.2 | 1.7 | 9.0 | 0.8 | 1.5 | 4.5 | 2.6 |
| 2 | 3.9 | 2.9 | 2.0 | 3.7 | 16.1 | 4.7 | 13.5 | 9.3 | 12.2 | 8.1 | 5.8 | 8.7 | 7.6 |
| 3 | 9.0 | 5.1 | 10.5 | 19.8 | 33.3 | 19.0 | 22.2 | 12.3 | 16.8 | 18.0 | 15.8 | 18.6 | 16.7 |
| 4 | 17.5 | 9.9 | 15.9 | 42.5 | 53.0 | 28.6 | 28.9 | 20.5 | 29.4 | 30.3 | 28.4 | 30.7 | 28.0 |
| 5 | 19.5 | 31.8 | 24.9 | 73.2 | 61.4 | 48.0 | 46.0 | 39.2 | 45.8 | 46.8 | 45.3 | 47.3 | 44.1 |
| 6 | 35.7 | 41.4 | 43.9 | 75.3 | 64.5 | 52.7 | 59.5 | 52.6 | 57.4 | 58.6 | 57.2 | 59.2 | 54.8 |
| 7 | 54.3 | 65.3 | 45.1 | 82.1 | 68.1 | 65.8 | 70.7 | 65.7 | 69.2 | 70.0 | 69.0 | 70.5 | 66.3 |
| 8 | 70.2 | 67.3 | 50.6 | 85.4 | 73.2 | 71.1 | 75.4 | 71.1 | 73.9 | 74.6 | 73.7 | 75.0 | 71.8 |
| 9 | 69.7 | 70.6 | 52.8 | 88.0 | 77.5 | 75.8 | 79.5 | 76.0 | 78.1 | 78.6 | 77.8 | 78.8 | 75.3 |
| 10 | 69.9 | 74.5 | 59.9 | 89.7 | 80.9 | 79.4 | 82.5 | 79.6 | 81.4 | 81.8 | 81.2 | 82.0 | 78.6 |
| 11 | 68.6 | 78.5 | 66.1 | 91.3 | 83.9 | 82.6 | 85.2 | 82.7 | 84.3 | 84.6 | 84.1 | 84.8 | 81.4 |
| 12 | 73.7 | 81.9 | 71.4 | 92.7 | 86.4 | 85.4 | 87.6 | 85.5 | 86.8 | 87.0 | 86.6 | 87.2 | 84.4 |
| 13 | 78.0 | 84.7 | 75.7 | 93.8 | 88.5 | 87.6 | 89.5 | 87.6 | 88.7 | 89.0 | 88.6 | 89.1 | 86.7 |
| 14 | 81.6 | 87.2 | 79.8 | 94.9 | 90.4 | 89.7 | 91.3 | 89.7 | 90.6 | 90.8 | 90.5 | 90.9 | 88.9 |
| 15 | 85.3 | 89.8 | 83.8 | 95.9 | 92.3 | 91.7 | 93.0 | 91.8 | 92.5 | 92.6 | 92.4 | 92.7 | 91.2 |
| 16 | 89.0 | 92.3 | 87.9 | 96.9 | 94.2 | 93.8 | 94.8 | 93.8 | 94.4 | 94.5 | 94.3 | 94.6 | 93.4 |
| 17 | 92.7 | 94.9 | 91.9 | 97.9 | 96.2 | 95.9 | 96.5 | 95.9 | 96.2 | 96.3 | 96.2 | 96.4 | 95.6 |
| 18 | 96.3 | 97.4 | 96.0 | 99.0 | 98.1 | 97.9 | 98.3 | 97.9 | 98.1 | 98.2 | 98.1 | 98.2 | 97.8 |
| 19 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Median in Years | 6.8 | 6.4 | 7.9 | 4.2 | 3.6 | 5.4 | 5.3 | 5.8 | 5.4 | 5.3 | 5.4 | 5.2 | 5.5 |

## Exhibit 9E
## South Carolina Payout Pattern as Cumulative Percent of Total Incurred

| Calendar Year | Fiscal-Accident Year Ending 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0.1% | 0.3% | 4.9% | 0.2% | 1.5% | 0.1% | 1.5% | 0.1% | 0.3% | 0.2% | 1.3% | 0.3% | 0.9% |
| 1 | 8.8 | 7.1 | 11.7 | 2.7 | 7.9 | 2.0 | 5.7 | 5.8 | 5.4 | 9.8 | 7.3 | 6.1 | 6.7 |
| 2 | 12.2 | 20.2 | 25.9 | 18.4 | 22.4 | 20.5 | 29.7 | 28.2 | 22.9 | 25.3 | 24.5 | 23.5 | 22.8 |
| 3 | 23.2 | 45.3 | 53.2 | 29.0 | 35.5 | 48.6 | 43.8 | 44.7 | 37.8 | 44.1 | 43.5 | 42.8 | 41.0 |
| 4 | 40.5 | 55.1 | 72.5 | 58.1 | 71.0 | 69.6 | 69.6 | 65.3 | 63.8 | 67.3 | 67.1 | 66.6 | 63.9 |
| 5 | 46.6 | 67.9 | 82.6 | 83.3 | 81.7 | 83.6 | 84.8 | 80.3 | 79.7 | 81.5 | 81.4 | 81.2 | 77.9 |
| 6 | 60.9 | 76.2 | 87.7 | 87.5 | 88.9 | 85.7 | 88.6 | 85.2 | 84.8 | 86.1 | 86.1 | 85.9 | 83.6 |
| 7 | 75.9 | 80.4 | 90.5 | 89.3 | 89.3 | 90.5 | 92.4 | 90.1 | 89.8 | 90.7 | 90.7 | 90.6 | 88.4 |
| 8 | 95.9 | 83.1 | 96.1 | 90.4 | 94.6 | 95.2 | 96.2 | 95.1 | 94.9 | 95.4 | 95.4 | 95.3 | 94.0 |
| 9 | 99.9 | 90.6 | 96.4 | 98.7 | 99.0 | 99.1 | 99.3 | 99.0 | 99.0 | 99.1 | 99.1 | 99.1 | 98.2 |
| 10 | 99.9 | 91.2 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 99.3 |
| 11 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Median in Years | 5.2 | 3.5 | 2.9 | 3.7 | 3.4 | 3.1 | 3.2 | 3.3 | 3.5 | 3.3 | 3.3 | 3.3 | 3.4 |

## Exhibit 9F
## Texas Payout Pattern as Cumulative Percent of Total Incurred

| Calendar Year | Accident Year 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0.2% | 3.4% | 0.1% | 0.0% | 0.0% | 0.2% | 0.4% | 0.0% | 0.1% | 0.3% | 0.3% | 2.4% | 0.5% |
| 1 | 5.1 | 8.1 | 2.6 | 0.6 | 4.8 | 1.9 | 4.9 | 0.8 | 2.6 | 7.9 | 8.3 | 3.4 | 4.3 |
| 2 | 18.8 | 13.3 | 4.8 | 14.8 | 12.3 | 14.8 | 14.6 | 17.5 | 20.1 | 29.1 | 22.2 | 18.0 | 16.6 |
| 3 | 28.0 | 22.2 | 12.8 | 26.7 | 26.7 | 24.2 | 32.5 | 28.0 | 38.6 | 37.6 | 31.5 | 27.8 | 28.1 |
| 4 | 51.9 | 32.0 | 20.5 | 31.8 | 43.0 | 43.6 | 49.8 | 36.1 | 55.2 | 54.4 | 50.0 | 47.3 | 42.6 |
| 5 | 66.7 | 43.5 | 44.8 | 36.7 | 54.5 | 47.8 | 62.7 | 65.7 | 75.9 | 75.5 | 73.1 | 71.7 | 58.8 |
| 6 | 74.5 | 51.7 | 47.6 | 59.4 | 59.8 | 68.5 | 75.8 | 77.5 | 84.2 | 84.0 | 82.4 | 81.5 | 69.6 |
| 7 | 77.0 | 57.4 | 53.2 | 68.5 | 71.0 | 76.8 | 82.1 | 83.4 | 88.4 | 88.2 | 87.0 | 86.3 | 75.7 |
| 8 | 77.5 | 66.4 | 63.0 | 72.3 | 75.2 | 80.1 | 84.7 | 85.8 | 90.0 | 89.9 | 88.9 | 88.3 | 79.4 |
| 9 | 77.8 | 67.9 | 69.6 | 76.9 | 79.3 | 83.4 | 87.2 | 88.2 | 91.7 | 91.6 | 90.7 | 90.2 | 82.2 |
| 10 | 78.3 | 77.2 | 75.7 | 81.5 | 83.5 | 86.7 | 89.8 | 90.5 | 93.4 | 93.3 | 92.6 | 92.2 | 85.7 |
| 11 | 88.5 | 82.9 | 81.8 | 86.2 | 87.6 | 90.0 | 92.3 | 92.9 | 95.0 | 94.9 | 94.4 | 94.1 | 89.7 |
| 12 | 92.4 | 88.6 | 87.9 | 90.8 | 91.7 | 93.4 | 94.9 | 95.3 | 96.7 | 96.6 | 96.3 | 96.1 | 93.1 |
| 13 | 96.2 | 94.3 | 93.9 | 95.4 | 95.9 | 96.7 | 97.4 | 97.6 | 98.3 | 98.3 | 98.1 | 98.0 | 96.6 |
| 14 | 98.1 | 97.1 | 97.0 | 97.7 | 97.9 | 98.3 | 98.7 | 98.9 | 99.2 | 99.2 | 99.1 | 99.0 | 98.3 |
| 15 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Median in Years | 3.9 | 5.8 | 6.4 | 5.6 | 4.1 | 4.3 | 4.0 | 4.5 | 3.8 | 3.8 | 4.0 | 4.1 | 4.5 |

## Exhibit 10
## Discounted Reserves

| Year-End 1987 | Florida | Kansas(1) | Massachusetts(2) | New Hampshire(3) | New York(3) |
|---|---|---|---|---|---|
| Invested Assets | $57,793,285 | $5,629,881 | $389,436,275 | $ 42,512,421 | $ 448,415,159 |
| Discounted Reserves | 68,274,116 | 5,658,749 | 819,388,707 | 43,233,833 | 693,263,914 |
| Difference | (10,480,831) | (28,868) | (429,952,432) | (721,412) | (244,848,755) |

| Year-End 1987 | Pennsylvania(4) | Rhode Island(3) | South Carolina(1) | Texas | Wisconsin(4) |
|---|---|---|---|---|---|
| Invested Assets | $56,753,291 | $ 87,877,960 | $ 24,923,319 | $105,936,918 | $ 81,338,182 |
| Discounted Reserves | 51,657,952 | 161,839,875 | 29,754,340 | 78,826,298 | 73,050,257 |
| Difference | 5,095,339 | (73,961,915) | (4,831,021) | 27,110,620 | 8,287,925 |

(1) Fiscal year ending 6-30-87
(2) Discounted 1987 reserve assuming Rhode Island runoff
(3) Invested assets include stablilization reserve fund
(4) Statutory reserve discounted at 6%

## Exhibit 11
## Current Invested Assets vs. Reserve Runoff

| | Florida | | New Hampshire | | New York | |
|---|---|---|---|---|---|---|
| Year | Estimated Paid | Invested Assets | Estimated Paid | Invested Assets | Estimated Paid | Invested Assets |
| 1987 | | $ 57,793,285 | | $42,512,421 | | $448,415,159 |
| 1988 | $14,750,000 | 45,432,633 | $7,251,563 | 36,785,434 | $ 57,955,244 | 408,938,853 |
| 1989 | 16,917,000 | 32,349,932 | 7,556,231 | 31,914,903 | 53,897,807 | 389,439,796 |
| 1990 | 17,055,000 | 18,025,112 | 7,088,326 | 27,156,679 | 55,993,155 | 366,205,188 |
| 1991 | 13,807,000 | 5,739,346 | 6,423,678 | 22,715,707 | 74,480,663 | 322,528,643 |
| 1992 | 7,652,000 | (1,428,280) | 5,197,911 | 19,176,266 | 105,529,273 | 244,129,544 |
| 1993 | 4,828,000 | | 4,179,853 | 16,396,470 | 110,023,746 | 154,641,267 |
| 1994 | 3,985,000 | | 3,266,776 | 14,326,798 | 111,859,315 | 55,789,927 |
| 1995 | 3,431,000 | | 2,967,317 | 12,405,479 | 99,325,762 | (38,842,948) |
| 1996 | 2,401,000 | | 2,725,846 | 10,585,355 | 89,362,067 | |
| 1997 | 1,527,000 | | 2,532,522 | 8,825,669 | 75,117,113 | |
| 1998 | 613,000 | | 2,363,177 | 7,106,853 | 64,123,637 | |
| 1999 | | | 2,263,340 | 5,362,383 | 58,892,614 | |
| 2000 | | | 2,137,174 | 3,616,715 | 53,056,472 | |
| 2001 | | | 1,941,469 | 1,939,302 | 48,428,733 | |
| 2002 | | | 1,636,855 | 444,035 | 48,718,050 | |
| 2003 | | | 1,269,517 | (793,062) | 51,196,006 | |
| 2004 | | | 848,629 | | 49,774,186 | |
| 2005 | | | 463,832 | | 36,207,976 | |
| 2006 | | | 179,865 | | 19,132,262 | |
| 2007 | | | 24,005 | | 7,186,232 | |
| 2008 | | | | | | |
| Remaining Liability | $18,697,654 | | $2,309,392 | | $640,038,296 | |

## Exhibit 11
## Current Invested Assets vs. Reserve Runoff

| | Rhode Island | | South Carolina | |
|---|---|---|---|---|
| Year | Estimated Paid | Invested Assets | Estimated Paid | Invested Assets |
| 1987 | | $87,877,960 | | $24,923,319 |
| 1988 | $ 24,939,418 | 66,232,764 | $8,176,375 | 17,714,619 |
| 1989 | 25,707,671 | 45,583,811 | 7,830,581 | 11,286,320 |
| 1990 | 28,170,864 | 20,894,541 | 6,735,668 | 5,444,072 |
| 1991 | 27,092,061 | (4,601,640) | 5,505,994 | 369,029 |
| 1992 | 24,793,267 | | 3,246,437 | (2,848,195) |
| 1993 | 18,681,953 | | 1,706,394 | |
| 1994 | 14,227,047 | | 1,325,646 | |
| 1995 | 9,345,298 | | 967,296 | |
| 1996 | 7,919,604 | | 536,389 | |
| 1997 | 6,789,941 | | 107,772 | |
| 1998 | 5,853,635 | | | |
| 1999 | 5,232,391 | | | |
| 2000 | 4,558,720 | | | |
| 2001 | 4,130,269 | | | |
| 2002 | 3,652,893 | | | |
| 2003 | 3,129,298 | | | |
| 2004 | 2,626,174 | | | |
| 2005 | 1,927,724 | | | |
| 2006 | 1,043,648 | | | |
| 2007 | | | | |
| 2008 | | | | |
| **Remaining Liability** | $118,513,501 | | $7,491,692 | |

## Exhibit 12A
## Florida Rate Filings for Physicians and Surgeons

| Year | Percent Asked For | Percent Approved | Date Approved, Disapproved, or Pending |
|---|---|---|---|
| 1977 | | | |
| 1978 | 20.9% | 20.9% | 7-9-78 |
| 1979 | -24.8 | -24.8 | 5-28-79 |
| 1980 | -25.0 | -25.0 | 5-15-80 |
| 1981 | 10.0 | 10.0 | 6-29-81 |
| 1982 | 30.4 | 30.4 | 9-9-82 |
| 1983 | 25.4 | 25.4 | 6-28-83 |
| 1984 | 77.6 | 77.6 | 6-1-84 |
| 1985 | 46.4 | 46.4 | 7-1-85 |
| 1986* | 20.0 | 10.0 | 6-29-86 |
| 1987 | 20.0 | 10.0 | 6-29-87 |

* Dental Classes only

## Florida Rate Filings for Hospitals and Other Facilities

| Year | Percent Asked For | Percent Approved | Date Approved, Disapproved, or Pending |
|---|---|---|---|
| 1977 | NO ACTIVITY | | |
| 1978 | -8.6% | -8.6% | 7-9-78 |
| 1979 | -19.6 | -19.6 | 5-28-79 |
| 1980 | -25.0 | -25.0 | 5-15-80 |
| 1981 | 17.3 | 17.3 | 6-29-81 |
| 1982 | 29.5 | 29.5 | 9-9-82 |
| 1983 | 50.4 | 50.4 | 6-28-83 |
| 1984 | 41.4 | 41.4 | 6-1-84 |
| 1985 | 6.2 | 6.2 | 7-1-85 |
| 1986 | 99.0 | 45.0 | 6-29-86 |
| 1987 | 99.0 | 45.0 | 6-29-87 |

## Exhibit 12B
## Massachusetts Rate Filings for Physicians and Surgeons*

| Year | Percent Asked For | Percent Approved | Date Approved, Disapproved, or Pending |
|---|---|---|---|
| 1977 | | 7.3% | |
| 1978 | | 0.0 | |
| 1979 | | 0.0 | |
| 1980 | | 10.0 | |
| 1981 | | 0.0 | |
| 1982 | | 9.1 | |
| 1983 | 162.0% | 42.0 | 5-18-84 Appealed |
| 1983 Supplement | 188.0 | 68.1 | 6-11-86 |
| 1984 | 41.6 | 10.9 | 6-11-86 |
| 1985 | 71.1 | 23.6 | 3-4-87 |
| 1986 | 10.3 | 8.7 | 3-4-87 |
| 1987 | 10.0 | 6.5 | 3-4-87 |

* Amount requested and final decision date not reported for 1977-1982

## Exhibit 12C
## New Hampshire Rate Filings

| Year | | Percent Asked For | Percent Approved | Date Approved, Disapproved, or Pending |
|---|---|---|---|---|
| 1977 | | NO ACTIVITY | | |
| 1978 | | NO ACTIVITY | | |
| 1979 | | NO ACTIVITY | | |
| 1980 | | 45.0% | 45.0% | 6-24-80 |
| 1981 | | 50.0 | 50.0 | 6-2-81 |
| 1982 | | 70.0 | 70.0 | 6-9-82 |
| 1983 | | 30.0 | 30.0 | 6-83 |
| 1984 | Basic | 5.1 | 5.1 | 6-13-84 |
| | Excess | 15.0 | 15.0 | 6-13-84 |
| 1985 | | NO ACTIVITY | | |
| 1986 | | 9.3 | 0.0 | 9-86 |
| 1987 | | 12.2 | 12.2 | 6-87 |

## Exhibit 12D
## New York Rate Filings

| Year | Percent Asked For | Percent Approved | Date Approved, Disapproved, or Pending |
|---|---|---|---|
| 1977 | 90.0% | 15.5% | 6-77 |
| 1978 | 98.0 | Disapproved | 6-78 |
| 1979 | 104.0 | Disapproved | 6-79 |
| 1980 | 186.0 | Disapproved | 6-80 |
| 1981 | 210.0 | 58.5 | 10-81 |
| 1982 | 243.0 | 15.0 | 12-82 |
| 1983 | 180.0 | 83.3 | 1-85 |
| 1984 | 62.0 | 52.3 | 1-85 |
| 1985 | 128.0 | 14.0 | 7-86 |
| 1986 | 135.0 | 9.0 | 7-86 |
| 1987 | 115.0 | 9.0 | 7-87 |

## Exhibit 12E
## Rhode Island Rate Filings

| Year | | Percent Asked For | Percent Approved | Date Approved, Disapproved, or Pending |
|---|---|---|---|---|
| 1977 | | NO ACTIVITY | | |
| 1978 | | 34.1% | | No hearing |
| 1979 | | 9.7 | 9.7% | 6-27-79 |
| 1980 | | 25.3 | | Withdrawn |
| 1981 | Basic | 7.4 | | |
| | Excess | 12.7 | | |
| | Total | 21.0 | 12.7 | 6-17-81 |
| 1982 | Basic | 41.3 | 23.1 | 6-23-82 |
| 1983 | Basic | 43.3 | 24.0 | 6-30-83 |
| | Excess | 24.7 | | |
| 1984 | Basic | 44.6 | 11.5 | 6-27-84 |
| | Excess | 25.9 | 16.7 | |
| 1985 | Basic | 101.3 | 30.0 | 6-28-85 |
| | Excess | 14.8 | 14.8 | |
| | Total | 131.3 | | |
| 1986 | Total | 91.4 | 36.1 | 7-1-87 |
| 1987 | Basic | 78.0 | 5.6 | 7-1-87 |
| | Excess | 9.3 | 28.9 | |

## Exhibit 12F
## South Carolina Rate Filings

| Year | | Percent Asked For | Percent Approved | Date Approved, Disapproved, or Pending |
|---|---|---|---|---|
| 1977 | Physicians | 50.0% | 50.0% | 7-1-77 |
| 1978 | Hospital | 133.0 | 133.0 | 7-1-78 |
| 1979 | | NO ACTIVITY | | |
| 1980 | | NO ACTIVITY | | |
| 1981 | Physicians | 40.0 | 40.0 | 7-1-81 |
| 1982 | | NO ACTIVITY | | |
| 1983 | Physicians | 25.0 | 25.0 | 7-1-83 |
| | Hospital | 20.0 | 20.0 | 7-1-83 |
| 1984 | | NO ACTIVITY | | |
| 1985 | Physicians | 25.0 | 25.0 | 1-1-85 |
| | Hospital | 40.0 | 40.0 | 1-1-85 |
| 1986 | Physicians | 25.0 | 25.0 | 1-9-86 |
| | Hospital | 45.0 | 45.0 | 1-9-86 |
| 1987 | | NO ACTIVITY | | |

## Exhibit 12G
## Texas Rate Filings

| Year | Percent Asked For | Percent Approved | Date Approved, Disapproved, or Pending |
|---|---|---|---|
| 1977 | NO ACTIVITY | | |
| 1978 | NO ACTIVITY | | |
| 1979 | NO ACTIVITY | | |
| 1980 | NO ACTIVITY | | |
| 1981 | 50.0% (A) | Disapproved | 4-16-81 |
| 1982 | NO ACTIVITY | | |
| 1983 | 263.0 (B) | 263.0 | 11-10-83 |
| 1984 | NO ACTIVITY | | |
| 1985 | 50.0 (C) | 50.0 | 5-21-85 |
| | 50.0 (D) | 50.0 | 10-29-85 |
| 1986 | 156.3 (E) | 104.7 | 8-1-86 |
| | 161.9 (F) | 109.9 | 8-1-86 |
| 1987 | 29.8 (E) | 29.8 | 9-25-87 |
| | 12.9 (F) | 12.9 | 9-25-87 |

(A) Hospital
(B) Dentists and oral surgeons
(C) Physicians, surgeons, hospitals, and other institutions
(D) Podiatrists
(E) Physicians and other non-institutional health care providers
(F) Hospitals and other institutional health care providers

## Exhibit 12H
## Wisconsin Rate Filings for Physicians

| Year | Percent Asked For | Percent Approved | Date Approved, Disapproved, or Pending |
|---|---|---|---|
| 1984 | 51.5% | 35.0% | 7-1-84 |
| 1985 | 69.6 | 69.6 | 7-1-85 |
| 1986 | 32.2 | 32.2 | 7-1-86 |
| 1987 | 9.8 | 9.8 | 7-1-87 |

## Wisconsin Rate Filings for Hospitals

| Year | Percent Asked For | Percent Approved | Date Approved, Disapproved, or Pending |
|---|---|---|---|
| 1984 | 67.2% | 49.0% | 7-1-84 |
| 1985 | 52.4 | 52.4 | 7-1-85 |
| 1986 | 51.4 | 51.4 | 7-1-86 |
| 1987 | 23.1 | 23.1 | 7-1-87 |

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